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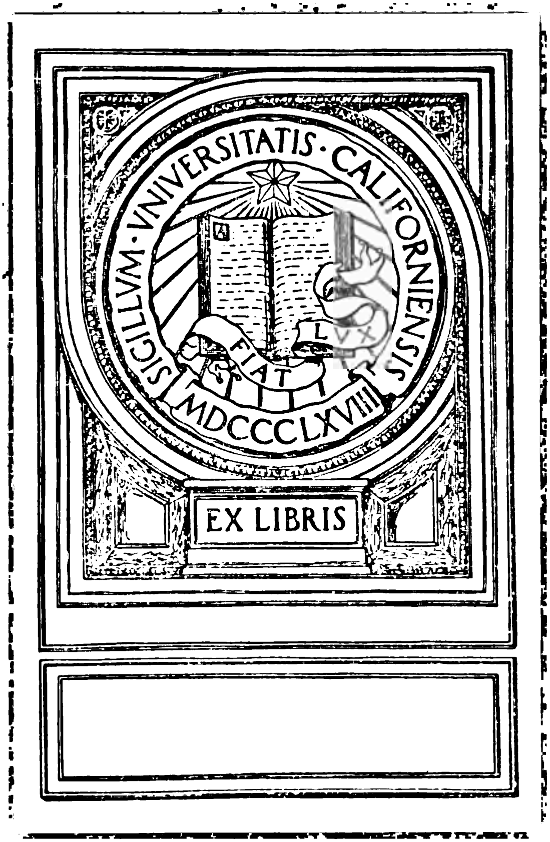
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A
MILITARY DICTIONARY,

OR,

EXPLANATION OF THE SEVERAL SYSTEMS OF DISCIPLINE OF DIFFERENT KINDS OF TROOPS,

INFANTRY, ARTILLERY, AND CAVALRY;

THE PRINCIPLES OF FORTIFICATION,

AND

ALL THE MODERN IMPROVEMENTS IN THE SCIENCE OF TACTICS:

COMPRISING

THE POCKET GUNNER, OR LITTLE BOMBARDIER;

THE MILITARY REGULATIONS OF THE UNITED STATES; THE WEIGHTS, MEASURES, AND MONIES OF ALL NATIONS;

THE TECHNICAL TERMS AND PHRASES OF THE ART OF WAR IN THE FRENCH LANGUAGE.

PARTICULARLY ADAPTED TO THE USE OF THE MILITARY INSTITUTIONS OF THE UNITED STATES:

BY WILLIAM DUANE,

LATE LIEUTENANT COLONEL IN THE ARMY OF THE UNITED STATES,
AND AUTHOR OF THE AMERICAN MILITARY LIBRARY.

An army without discipline is but a mob in uniform, more dangerous to itself than to its enemy. Should any one from ignorance not perceive the immense advantages that arise from a good discipline, it will be sufficient to observe the alterations that have happened in Europe since the year 1700. SAXE.

I am fully convinced that the tactics of Frederic II. the causes of his superiority, of his system of battles and lines, and of his most skilful movements have been wholly misunderstood to the present time, and that the actions of this great man have been attributed to maxims diametrically opposite to his real principles. JOMINI.....1808.

PHILADELPHIA:

PRINTED AND PUBLISHED BY WILLIAM DUANE,

NO. 98, MARKET STREET.

1810.

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DISTRICT OF PENNSYLVANIA, TO WIT:

BE IT REMEMBERED, that on the Tenth day of August, in the Thirty Fifth year of the Independence of the United States of America, A. D. 1810, William Duane of the said district, hath deposited in this office, the title of a book, the right whereof he claims as proprietor, in the words following, to wit: "A Military Dictionary; or, Explanation of the several systems of discipline of different kinds of Troops, Infantry, Artillery, and Cavalry; the Principles of Fortification, and all the Modern Improvements in the Science of Tactics: comprizing the Pocket Gunner, or Little Bombardier; the Military Regulations of the United States; the Weights, Measures, and Monies of all Nations; the Technical Terms and Phrases of the Art of War in the French language. Particularly adapted to the use of the Military institutions of the United States: by William Duane, late lieutenant colonel in the army of the United States, and author of the American Military Library. An army without discipline is but a mob in uniform, more dangerous to itself than to its enemy. Should any one from ignorance not perceive the immense advantages that arise from a good discipline, it will be sufficient to observe the alterations that have happened in Europe since the year 1700. *Saxe.* I am fully convinced that the tactics of Frederic II. the causes of his superiority, of his system of battles and lines, and of his most skilful movements have been wholly misunderstood to the present time, and that the actions of this great man have been attributed to maxims diametrically opposite to his real principles. *Jomini*....1808."

In conformity to the Act of the Congress of the United States, intituled "an Act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies during the times therein mentioned." And also to the Act, entitled "an Act supplementary to an Act, entitled 'an Act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies during the times therein mentioned,' and extending the benefits thereof to the arts of designing, engraving, and etching historical and other prints."

D. CALDWELL,
Clerk of the District of Pennsylvania.

ELUCIDATORY PREFACE.

WHEN the editor first undertook to prepare a MILITARY LIBRARY for general use, he was stimulated thereto by perceiving the total decay of military information, and the gross errors, in particulars the most simple and essential, which every where had superceded or obstructed useful knowlege. War at the moment seemed to be impending. There was no organization of the militia, nor any system established, excepting an incomplete elementary hand book, formed during the revolution, and adapted to fix those who had already some military experience of the first evolutions of a battalion, in a common method.

This book, no way calculated to teach the initiatory exercises, nor to give an idea of the combined manœuvres of larger bodies; nor any method of instruction, nor the duties of any other body than an infantry battalion, was improperly dignified with the name of a *system*. The most elevated in power as well as the most subordinate in military or militia duty, adopted this false notion of a system, without enquiring further than that it was established. When such a tract was held forth as sufficient by the authority of law and by the silent indifference of those who knew or ought to know better, it is not at all surprizing that every other object of military study was neglected, since every other was announced to be superfluous.

This state of general indifference or unacquaintance with the business of war, gave rise to the American *Military Library;* in which the editor intended originally to have comprehended a *vocabulary of military terms;* and had made so much progress in its preparation, as to discover that it would make a large book, and that any thing short of a minute and comprehensive Dictionary, would be leaving the undertaking still incomplete. The general *want* of knowlege on the subject, the inaccuracy of the notions which prevailed, and above all the great revolutions which modern times had produced in the whole economy and ordination of military science, decided the editor upon the necessity of rendering the undertaking as complete as practicable, by giving to the public a competent book of reference, so necessary to study in the acquisition of every species of knowlege.

After some numbers of the Library had been published, the French Military Dictionary of 1768, and the English Military Dictionary of major James, fell into the editor's hands. These works rendered much of what had been already done superfluous, though not entirely useless; the French work had been antiquated long before the revolution, by the changes which took place in the French establishment in 1788 and 1791, and still more by the total renovation which it underwent during the revolution. The English Dictionary labored under difficulties of another nature; adapted to England alone, the military system of England, called by the name of Dundas, which was only a modification of the Prussian system of Saldern, and the French system formed in imitation of the Prussian after the seven years war, must necessarily be to a British officer the standard of a work published for the British army; accordingly, although major James, both from his fine understanding and experience, was well acquainted with the defects of that system, he was still under the necessity of making it his standard.

In undertaking to give a work to the American people, the publication of either the French or English Dictionary, though it might equally profit the bookseller, would be only imposing upon the public, instead of giving the best information and the most recent and approved principles and improvements in the art of war: it was necessary therefore almost to *re-write*, and to augment to a vast bulk the quantity of information. The whole has been, therefore, mo-

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delled and adapted throughout to the modern principles of discipline and general tactics. So much of what is old has been retained as may give some correct ideas of the systems of other nations; and the body of information, as well as of words of reference, renders this the most ample and particular Military Dictionary that has been published in the language

To the general mass has been added the useful little work called the *Little Bombardier*, or *Pocket Gunner*, originally compiled for the British artillerists from the French *Manuel de l'Artilleur* of Durtubie. The measures of extent and capacity, and the monies of all foreign nations: under the words *Tactics*, *Military Schools*, *Topographical Depot*, *Money*, *Weights and Measures*, *Valor*, and generally throughout the work will be found a vast body of new information, particularly adapted to the communication of correct knowlege to all who wish to comprehend military subjects.

A too prevalent error, and the most fatal if we should ever be engaged in war, and not acquire more perfect and general knowlege, is, that the art of war requires neither study nor much attention to what is called discipline; and this error has obtained a sort of sanctity from the triumphs of our undisciplined yeomanry over the British, Hanoverian, Wurtemburg, and Hessian veterans in our revolution. Undoubtedly without an examination into the causes of the triumphs in a more particular manner than general history presents, the assumption is very imposing, and adapted to flatter self-love and national pride.

These natural and often useful passions must, nevertheless, be restrained like all others within the bounds of reason; and, in order to avoid the danger which may flow from our prejudices, we must endeavor to consider our own circumstances with eyes as dispassionate as we should those of strangers. We must enquire, what was the state of military knowlege in the armies of the invaders; whether they exhibited any of the great qualities which constitute well disciplined troops or great generals; whether the whole course of their military transactions was not a series of blunders, produced by their ignorance of our people and country; and even in a great degree owing to the want of talents in the officers of the enemy, to supply by their genius and spirit of enterprize, the disadvantages under which they labored. It would require only an enumeration of a few facts to shew, that although the patience with which the American troops endured hardships and privations, afford glorious examples of the military virtues; that even these great virtues, conducted as they were, by a general who united in himself the military qualities of a Fabius and a Scipio, could not have had so much success were it not for the want of a good discipline, and the utter incapacity of the generals of the British army.

In the modern wars of the French revolution, the like truths have been demonstrated as in the American contest. The British armies had been merely taught the duties of parade, and when they came into the field, had to learn by hard fighting and severe defeats, that their officers were generally ignorant of the art of war; for they were beaten once more by *raw troops* ably conducted to the field by experienced officers, who possessed skill, who had made military science their study; and, above all, who knew how to take advantage of the incompetency of the British leaders.

Mankind in every country, educated in the same way, varies very little in those points which are adapted to military services. It must, therefore, in a great measure depend upon the education which is applied to military affairs, in the discipline of armies, whether they are victors or vanquished. All nations profess to have acted upon this opinion, though there seems not to be that attention paid to the subject, nor to education of any kind, which the acknowleged importance of the case calls for. This indifference or heedlessness has at times infected all nations, and may be considered as a disease, which if not cured at a certain stage, ensures destruction.

The triumphs of Spain before the peace of Vervins in 1598, is a most important part of history for the study of men fond of military enquiries; the infantry of Spain was then the first in Europe; we have seen in the years 1808 and 1809, that the extinction, by the neglect of military knowlege, has left Spain, with ten millions of people, an easy conquest. *Austria* and *Prussia* have successively shone preeminent on the military theatre of Europe. The daily parades at Berlin, which Frederic II. conducted himself for many years, and from which strangers were excluded, were only lessons of experiment and instruction by which he formed his own mind to the conviction of the power of rapid movement, and close evolutions by small divisions; divisions moving in different modes, and by different points, in apparent disorder but by the most exact laws, to one common point of action. Here it was that he contrived those methods which he accomplished in action afterwards, and which enabled him, with a force not equal to half the Austrian army, to baffle, defeat, and triumph over all Europe. It will be useful for the man of sense to consider, whether Frederic could have performed such wonders in the field, without this previous practice himself, and the previous discipline which rendered his armies of 40,000 as manageable as a battalion of 500 men. Perhaps we shall be told that *Steuben's* tract renders all these considerations unnecessary.

The military triumphs of modern France have been ascribed to a multitude of causes; really, perhaps, the causes of her military successes may be reduced to two. First, the necessity which arose out of what has been preposterously called the balance of power in Europe, which under the pretence of maintaining an equality of nations, has been the real mask for reiterated wars, conquests, plunder, and desolation; Spain, Austria, and France, have been at different periods held up as aspiring to universal dominion; under the color of resisting the aggrandizement of either, they have been for two centuries constantly engaged in efforts to plunder each other. France, from her position, was from the passions of the age, forced to be prepared for the defensive; and in several successive wars had made conquests on her extremities, which rendered it daily more necessary to maintain a military establishment; and at length, after suffering great disasters, and thereby producing a succession of great generals, the passions and character of the people became military.

Taught by triumphs and disasters, the causes of success and failure, her generals and statesmen directed their attention to the perfection of all the branches of military institution; the management of weapons, the array of troops, the plans of marches, the supply of armies, the passage of rivers, and the simplification of every species of duty. Colleges were instituted, the sciences were enlisted in the military service, and it was difficult to tell in which class of citizens the greatest military enthusiasm prevailed....the nobles who alone could aspire to command, or the privates who composed the rank and file of armies.

It is to these institutions, through which the path to honor and renown lay, that France owes her present preeminence. Under several heads of this Dictionary will be found the facts upon which this opinion is sustained; other nations rather *aped* than *emulated* her institutions; while France pursued the spirit of the Romans who adopted every weapon which they found powerful in the hands of their enemies; France adopted the prolonged line of the Austrians, or abandoned it to pursue the concentric movements of Prussia; those echellons which under another name were among the manœuvres of Scipio and Gustavus Adolphus, and which so many have affected to laugh at as novelties, because they know neither their history nor their use; were recommended by *Guibert* in 1763, as the *column* had been before recommended by *Folard;* and each of whom had been calumniated and their tactics reprobated, by the enemies of innovation, or rather by the blockheads of their day, *a class of beings which some are to be found every where.*

The rapid principles of Frederic, and the evolutions of the echellon and column adapted to the concentric method of movement, upon oblique as well as direct lines; and all executed with a combined precision before unusual, constitute the great features of the modern tactics. Simplicity of method in instruction is the key to it.

It must be evident to the humblest understanding, that a great part of the success of armies in war must depend as much upon the knowlege of the enemies' mode of movement and action, as well as in the perfection, precision, and promptitude of execution in their own. Voltaire, whose history of Europe is alike admirable for its conciseness and authenticity, since all his information on military affairs was drawn from the *military depot* established at Versailles, speaking of the battle of Rosbach, attributes the defeat of the French under Soubise to their ignorance of the new methods of movement which had been introduced by Frederic II. The soldiers saw that the old method of battle was changed; they did not comprehend the motions of the Prussians, which were not merely novel, but as exact as the movements on a parade; they believed they saw their masters in the art of war, they were dismayed and fled.

This anecdote, which has many resemblances in ancient history, is of great moment in directing the understanding to the consideration of military institution. It leaves no doubt of the necessity of knowing the art of war as it is practised by other nations, and especially the importance of practising that which has proved superior to all others.

A fatality has attended all the efforts which have been made for several years to introduce a suitable organization of the militia, and a correct military system. The genius of ignorance appears to have cast a spell over all the attempts that have been made. Like the projector who was so much occupied by the erection of a *weathercock*, that he set about it before the foundation for the steeple was laid, every attempt has been made at the wrong end; a part has been mistaken for a whole, composed of numerous parts, and the wrong part has always been chosen first. America, which has been so original in the revolution as to give rise to the institution of rifle corps, which have decided seven-eighths of the battles that have been fought in Europe since; has been led to resort constantly to the very system of which America proved the futility, for precepts and examples; instead of profiting by the march of science, we have gone for instruction to the worst military institutions of Europe. When any person intrusted with the military concerns of the U. States wants information, it is to authorities exploded and condemned by men of military knowlege, reference is made. A minister of England in addressing that nation in 1806, at the very moment when it was announced to that nation that the *bellum ad internicionem* had only then begun.... that "the war was now at the foot of her walls," had the honesty, which times of danger extracts even from ministers, to declare...."*The military system of England was equally in want of repairs, or rather a thorough rebuildiug, even to its foundation stone.*" There is no truth more certain, yet it is to this tattered and defenceless fabric we resort for models on every occasion. The bill for establishing a *quarter-master general's department,* which was before congress in 1809-10, is a scion of this decayed tree; no doubt that as long as the present apology for a system exists, the proposed department may serve, as a crutch is of use to a body stricken with paralysis.

Military science even in France, where it has now reached the greatest perfection, has had to struggle with selfishness and the occasional and almost insuperable difficulties, which the appointment of ministers incompetent and inexperienced in military affairs, threw in their way. Folard is reputed to have died broken-hearted, by the persecution which he experienced from stupid generals and ministers who looked to nothing but official patronage. Levrilliere, whose admirable improvements in the various departments of artillery, to whom is owing the reduction of the length and the weight of metal of guns of the same calibre, was persecuted out of France, and obliged to take refuge in the army of Austria, where his services proved so formidable as to induce his recall, and the final adoption of his vast improvements; those improvements which, by lessening the weight of artillery, have led to the powerful institution of horse artillery.

Wise nations are never disposed to reject the useful because it is not of their own invention. The Austrians after the battle of Austerlitz immediately abolished their old discipline, and the archduke Charles instituted a better system upon the principles of the modern French. Even the French themselves, surrounded by triumphs, have not yet deemed the science of war perfect. New dispositions of the column were adopted in Egypt; it was only in 1808 that the *regulations* for the exercise and manœuvres of *Cavalry* were completed; and even since the campaign which closed with the battle of Wagram, they have made some important alterations in the arms of their cavalry, founded either on the experience of inconvenience in their own, or of some superior advantages in those of their enemy.

The conclusions which we draw from these facts are, that the prevalence of erroneous opinions on the military institutions is a subject of very serious concern; because it is evident, that so long as a nation or a government, which has the care of the national concerns, and a great influence over its opinions, suffers ignorance and prejudice to occupy the place of intelligence, a similar fate may be considered as the consequence, whenever the nation shall be attacked, as other negligent or ignorant nations have been, by a power of superior knowlege and capacity in the art of war.

Nothing more plainly shews the misconception which generally prevails, especially in the legislatures of the Union and the several states, than the contradictory motives which are assigned for leaving the militia and military system in their present state of disorganization. Some plead that the art of war is laid down in Steuben; others that Steuben carried us through the revolution; when in fact both Burgoyne and Cornwallis were taken before Steuben's tract was introduced; others are for arming our militia with pikes alone, forgetting that an open country is that for which pikes are best adapted; and that to render pikes effective there must be a most perfect discipline of manœuvre, which may render the line as potent and firm as the column, and as easily displayed, concentrated, and formed to various fronts as the best disciplined infantry; when the new modes of movement are mentioned, they are called novelties, though the principal of them are as old as the battle of Pharsalia, and were in practice at the battle of Lutzen; other exceptions are, that besides being new, the modern discipline is too difficult to learn, too perplexed and fatiguing; that the multiplied manœuvres require more time and labor, and must be in a great measure useless; and that so satisfied are the British of this that they have reduced them all to nineteen manœuvres. Nothing so truly depicts the want of judgment or a proper attention to the subject, as observations like these.....the truth is that the modern principles of instruction are *fewer in number*, more easily taught and understood, and less irksome to the soldier; better adapted to engage the soldier's attention and afford him gratification; that the variety and number of evolutions is not more various than the eternal variety of ground by which military movements and dispositions are always governed; and that the new discipline, by teaching the first elements well, enables the military body to be moved by these principles on any ground, and not only to form any disposition that it is possible to form, but without having been previously formed in such new dispositions; the elementary principles of modern discipline being peculiarly adapted to the understanding, and the movements by small bodies, enabling every officer of a small portion of troops to move his particular corps by the mode best adapted to the ground.

It must always be the fault of the government if its military institutions are erroneous. If there were but a single regiment, that should be instructed according to the best principles, and made to practise whatever was most useful and necessary in the art of war. In a nation of freemen the *regular* force should constantly exhibit their exercises and evolutions, so that every citizen should be familiar with the best practice of the use of arms and of manœuvres. The eye may be said to have an infallible memory, it is above all other of the organs of sense the best medium of intelligence. The United States troops are usually cooped up in garrisons, as if they were, like the king of Prussia, forming a system *in secret*, while in fact there is nothing worthy of the name of discipline carried on, and in too many instances nothing understood. Perhaps the troops of the United States have not, as a part of discipline, fired a ball at a target for twenty years. Field artillery, or mortar practice, probably not more frequent. The maxim of economy is an important one in a free state, but there is an economy more destructive than the greatest profusion; and that is the economy of practical and useful knowlege.

We speak of these things reluctantly, but the evil is almost a disease, and requires the regard of the intelligent men in all parts of the nation.

What is then requisite for the United States?

It will be said that there is some difficulty in effecting any improvement. Unquestionably so it is, and so it ever will be. But the government is bound not to regard difficulties, when they are put in competition with the dangers which may flow from neglect. The government possesses the power, and the army is bound, and the country is anxious to possess a more complete system in lieu of the once useful but at present useless tract of baron Steuben. The difficulties are not so great as may be at first sight supposed, and may be surmounted in a way rather to serve as a pleasure than a difficulty to the army and militia. The elements of modern exercise might be first introduced, they are neither so numerous, so perplexed, nor so unnatural as the old forms; neither are they so tiresome to the teacher or the taught. They have also another advantage, that the soldier is not as heretofore stiffened and set up like an embalmed Egyptian mummy; the modern method takes any number from 10 to 100 men, and places them in an easy position erect without constraint of head, or limb or body; and proceeds by familiarizing the ear to equal time by the action of the feet of the whole squad or company; after which they are all taught to face to either hand or about, indifferently, and never in one routine; the mode of moving the limbs and the time of movement is ever the same; and the words of command few, simple, and plain; where they in any case differ from the usual words of common life the teacher's duty is to explain them often, until the ears of all are familiar with their practical meaning.

The next process is advancing, at a given length of pace in equal times; and this is combined with facings, and at last with wheelings, in whole ranks, or in sections of any given numbers, always varying, diminishing, and augmenting at discretion the numbers of the sections, by drawing from the right of each successive section in the rear of the first, to the left of the leading section, a number sufficient to augment the first to the number required, and so of every section from front to rear; the drill is thus carried on always with moving feet at the time of gay dancing music, and when marching always at a pace of 24 inches.

After the squad of 20 or 100 is found complete in these minute branches of marking time, advancing at time, facing and wheeling, augmenting and diminishing sections, they are taught the oblique wheelings and facings, or as the modern words are *half* or *quarter facing*, or *half* or *quarter wheeling;* and to march dressed in these several orders, so as to form exactly in the same relative position to each other when wheeled or faced to their primitive position.

Thus much may be well taught, and comprehended, and practised in two or three weeks, employing only two or three hours at each drill, and twice each day.

The instruction of the pivots or flank men of ranks and sections, go along with the first wheelings; and as soon as the uses of the pivots are generally understood, then the whole are formed into double ranks; and the men are prepared to execute any of the modern evolutions or manœuvres; it being always calculated that the officers are equally diligent and as well drilled as the men, and competent not only to comprehend but to correct an error when it occurs.

At this stage, and not before, arms should be put into their hands; and a manual exercise of some kind taught, for it is not material what the motions are so that the firing and loading motions are taught to be performed with dexterity and ease. The drill is then manœuvred once a day with arms, and the officer who feels a proper sense of the importance of the habit of command, and the advantage of giving troops the practice of movement, will diversify his own pleasures and gratify his men, by moving them into all the various positions of column, line, echellons, movements by heads of sections, changing flanks and fronts, taking new alignements, countermarching in the various modes of which modern military works furnish such useful and abundant examples.

The elements of the first drills with minute instructions might be comprised in a hand book of one half the compass of Steuben's tract; and this elementary work placed in the hands of all descriptions of troops, infantry, artillery, and cavalry, should be the first rule of practice for them all in common. This introduced, the government could at leisure prepare instructions for a more comprehensive course of manœuvres, and particularly hand books upon the same simple principles of drills for artillery, riflemen, and cavalry, in their particular branches of duty. It being to be understood as a fundamental principle, that as the movements and action of all kinds of troops are regulated by the movements of infantry; or in other words, as infantry compose the main body, line, or column; the riflemen, artillery, and cavalry must be governed in their movements by the main body, to which they are appendages or auxiliaries; and it is therefore required that they should know themselves how to execute the infantry manœuvres, in order that they should not, like the French at Rosbach, be confounded by movements of which they are ignorant.

The profound mathematician may look down from the elevation of abstract science upon the cold common place of syllabic combination and Arabic numerical notation; but he owes his first knowlege to the alphabet of language and arithmetic; here he must have begun, and here the military man of whatever grade must also begin. He must learn the alphabet of military knowlege at the drill, he must take his lessons and learn them; he must study and practice what he has learned there, in order to teach; and the officer must learn both to command others and to obey. There is no science which may not be attained by earnest application and practice. But no science or art can be acquired or understood without both; and the more carefully that study is pursued and the more frequently it is practised, the more efficient will it be in the individual and in the regular mass of individuals. But practice is above all requisite, careful, frequent, constant, obstinately pursued practice.

But this is not yet a system.

We have exhibited the elementary branch of military instruction first, merely because it is the point at which every military body must commence; because this is what is now most wanted, and because while it is carrying into practical use, the general system containing all the purposes and uses of an efficient military establishment may in the mean time be prepared and digested.

Having treated so much on this subject, its importance will excuse the discussion of it more at large. To the perfection of a military establishment for the U. States two things are essential.

The *first* is, that it should be such as to be equally applicable in its operation to the militia and to the army of the U. States, whenever the former are called forth.

The *second*, that every act and duty appertaining to the military establishment should be transacted by none other than men subject to military order, control, and responsibility; and liable to be put in motion or brought to account for delay or neglect in a military manner.

These two principles lead to the consideration of what would be an efficient military organization; and here we have a host of formidable enemies, *ignorance*, *a disorderly mass*; *indolence* and *idleness*, hanging on the flanks; the *steady habits* of *old prejudice* ever alarmed for its patronage or its place; all immediately exclaim, would there not be great confusion produced by abrogating some duties and introducing others. We shall not skirmish with this motley and unmilitary groupe; we shall come to the point. In considering the subject, it will be found that the present war department in fact corresponds with what is called the general staff in other countries; the president representing the commander in chief, the secretary at war chief of the staff. From this fact it will be perceived, that whatever improvements might take place in the system, it would at first consist only of defining and distributing the duties and details of service by the war department.

After defining and arranging the various heads of service, they should of course be classed according to analogy or the dependency of one kind upon another; so that there would be several heads, under each of which the inferior branches of duty might be distributed. At the head of one of the superior branches should be placed a responsible officer, who would have the superintendance of all the duties, and the direction and control of all those placed in the execution of the subordinate branches; this officer to be responsible to the executive directly in peace; and when the arrangements became necessarily distinct in the field, to become responsible to the commanding officer in the field. These heads of branches should be the efficient staff of the military institution, it is through the perfection of the organization of the staff, and the rigid responsibility for the due execution and for seeing all under them duly performed, that modern tactics is in an eminent degree indebted for its preeminency and its triumphs. Precision, promptitude, and provident foresight, are their invariable laws, and upon these being perfect depends all the success of modern military science; but it must be taken in connexion also with the disciplinary principles which go into action, where the same provident foresight, the same precision, and the same celerity of motion ensure success to all that is undertaken against any force, however numerous and brave, destitute of a system equally provident and combined in its operations.

To commence an efficient system we must take the outline upon the *largest scale*; that is, in preparing an establishment, of which the end is the defence of all the nation, we must not begin with a system which is only adapted to a peace; an assumption of this kind would render any military system nugatory. To form a system complete, it must be founded in its very nature on the supposition of an actual war. This would no doubt be reversing the present order of things; since it is not to be concealed, that as it is at present constituted, the war department is utterly incompetent to conduct a war; but such as would leave the mind of a general officer, in case of actual war, to labor under a most hazardous and perplexing responsibility. Possibly economy may here take the alarm, we shall quiet this *costly chimera*.

A peace establishment of the military department we conceive should be treated as the incident; forming and fixing the principles of the institution would not necessarily call for its immediate completion, or the appointment even of a single officer, or the expenditure of a single dollar more than at present; the duties and functions should be defined, but no additional officers employed until occasion called for them, *that is war*. It is necessary to offer these precautionary ideas to prevent misapprehension, and lest the idea of the formation of a system, that is a coherent and comprehensive regulation for the military department, should be mistaken for a wish to immediately organise an army and staff, and put them into pay. It is barely meant that during peace provision should be made against war, which we do not know how soon we may be involved in.....we shall therefore proceed.

The military system may be said to consist of two principal branches, *military operations*, and *subsistence*, both of which must be within the full and ample command of the chief of an army. These two branches become the objects of duty distributed among the staff; which unfolds another important truth, that every officer who has the provision, or charge of procuring supplies of subsistence or clothing, should be responsible in a military manner for the execution of his duty, and liable to military penalties for the abuse or the neglect of that duty. This is a most important consideration; and it is apprehended the scandalous state of the clothing of the army of the U States, which has been gradually becoming worse for several years past, is a strong exemplification of this necessity. There should not be a single officer of the war department, unless perhaps the accounting officers, who should be exempt from military control, in order to assure a due exercise of their duty between the public and the military establishment; as it would be in the power of men intrusted with the provision of clothing or subsistence at any time.... *to betray the army to an enemy*.

The beginning should be with the organization of the general staff, and this should be adapted, for the reasons given, to a state of war. The secretary of the war department being in fact the chief of the staff, the rest of the staff should consist of an able practical general officer, a capable chief officer of the artillery, an effective chief officer of the engineers, a vigilant and experienced quarter-master general, and an intelligent and experienced adjutant general, with one or two commissioned officers, as the service might require, attached to each of these several officers as aids, who should execute under a board of war the details of duty; these superior officers, with others called in, should constitute this council or board for the regulation of all the military details; appoint inspectors of reviews; and such other persons as might be required to aid in the service, such as surgeons, draftsmen, &c. They should divide their duties into the military and the administrative, and have cognizance and control over every branch, always subject to the chief of the staff or secretary at war; they should assemble and deliberate, and their consultations and measures, however minute, with their reasonings or objections, should be daily recorded; and these consultations should, whenever required, be presented to the secretary at war, to the president, or to congress when called for.

The military branch should be distributed under the heads following.....

MILITARY I....PLANS AND MEANS OF DEFENSIVE OR OFFENSIVE WAR.

1. This should comprehend a topographical establishment; the preparation of complete maps and surveys of our own country; and a classification of the surface of the Union into districts of equal portions of three, five, or nine parts; and these again into lesser districts; designating all the passes, roads, rivers, &c, in each, with descriptive memoirs and references to each.
2. The police of armies.
3. Military exercises or discipline.
4. Military operations, marchings, and encampments.
5. Movements of troops by water.
6. Military chronology, or daily and other returns, of duties, actions, retreats, &c. &c.

FISCAL II....SUBSISTENCE, PECUNIARY AND CIVIL ADMINISTRATION.

1. Pay, receipts, and expenditures, or the treasury branch.
2. Clothing, equipments, arms.
3. Provisions, meat, bread, grain, liquors, fuel.
4. Forage, hay, oats, straw, corn.
5. Hospitals and magazines.
6. Carriages and horses for stores and artillery.

Such is the outline of a military system adapted to the circumstances and necessities of the U. States. On a superficial glance, to timid or unreflecting men, this may appear to be surrounded with difficulties insuperable; there will be discordant opinions, envy, jealousy, folly will devise objections; no two men may concur, however equal and able; the objects are themselves too numerous and complex for any one man to prepare in time or in a satisfactory manner; the proposition itself will be said to arise from interested motives; from some lust of place or profit; it will require resolution to resist prejudice; and the requisite firmness to decide may not be found.

We shall close this part of our essay by stating generally, that whenever there shall appear a disposition to adopt this or any such system, means can be pointed out by which the insuperable difficulties shall be made appear easy to be overcome; discordant opinions reconciled and brought spontaneously to concurrence; envy, folly, and jealousy will be allowed to prey upon themselves, without danger of annoyance to the plan; the variety of the objects can be made subservient to render them more simple, practicable, and effective; and instead of the merit being ascribed to any one man, every officer in the army and the militia if they choose shall have an opportunity of laying his claim to a participation in the plan.

If the observations thrown out in this preface are well founded, the necessity of a work of this kind will be immediately perceived. Let it not however be imagined, says major James, that a Military Dictionary ought exclusively to belong to a camp or barrack, or be found in the closets or libraries of military men alone. The arts and sciences are so intimately connected together, that they eventually borrow language and resources from each other, and go hand in hand from the senate to the field, from the pulpit to the bar, and from the desk of the historian to the bureau of the statesman or politician.

We have a few words to say on certain parts of the work. The French phrases are adopted for their usefulness in reading, and often even in political reading: the words and phrases in the language of the East Indies, are adopted from the English Dictionary, in which however there were some errors which the editor of this work was enabled to correct, and to give more accurate explanations to many. Some subjects which might with more propriety be placed under one letter are placed under another; the course of reading which the editor commenced cotemporaneous with the preparation of the three first letters, not affording the illustrations until the letter to which they properly belonged had been printed. Thus under *Valor* will be found much of what would properly come under *Courage;* and under *Topographical* what would properly belong to *Depot*. There are several similar instances.

Should the disposition be manifested to cultivate the knowlege of military subjects generally, the editor proposes at some future day to publish gen. Grimoard's treatise on the *Staff* of armies; the French Regulations for Cavalry of 1808; and the most modern and celebrated works on Tactics, the treatise of Jomini, the 4th volume of which was published in the beginning of 1810. All these works are already translated and ready to be put to press; beside a Dictionary of all the military actions recorded in ancient and modern history which is now in great forwardness.

Military men who may be desirous of adding to the stock of useful and correct knowlege, will oblige by pointing out any defects or errors, or recommending any additions that are pertinent to the nature of this work, addressed to the compiler.

JULY 4, 1810.

MILITARY

DICTIONARY.

ABATIS, in a military sense, is formed by cutting down many entire trees, the branches of which are turned towards an enemy, and as much as possible entangled one into another. They are made either before redoubts, or other works, to render the attacks difficult, or sometimes along the skirts of a wood, to prevent an enemy from getting possession of it. In this case the trunks serve as a breast-work, behind which the troops are posted, and for that reason should be so disposed, that the parts may, if possible, flank each other.

ABLECTI, *in military antiquity*, a choice or select part of the soldiery in the Roman armies, picked out of those called *extraordinarii*.

ABOLLA, *in military antiquity*, a warm kind of garment, generally lined or doubled, used both by the Greeks and Romans, chiefly out of the city, in following the camp.

ABORD, *Fr.* attack, onset.

S'ABOUCHER, *Fr.* to parley.

ABOUT, a technical word to express the movement, by which a body of troops changes its front or aspect, by facing according to any given word of command.

Right ABOUT, is when the soldier completely changes the situation of his person, by a semi-circular movement to the right.

Left ABOUT, is when the soldier changes the situation of his person by a semi-circular movement to the left.

ABREAST, a term formerly used to express any number of men in front. At present they are determined by Files.

ABRI, *Fr.* shelter, cover. *Etre à l'abri*, to be under cover, as of a wood, hillock, &c.

ABSCISSA, *in military mathematics*, signifies any part of the diameter or axis of a curve, contained between its vertex or some other fixed point, and the intersection of the ordinate.

In the parabola, the *abscissa* is a third proportional to the parameter and the ordinate.

In the ellipsis, the square of the ordinate is equal to the rectangle under the parameter and *abscissa*, lessened by another rectangle under the said *abscissa*, and a fourth proportional to the axis, the parameter, and the *abscissa*.

In the hyperbola, the squares of the ordinates are as the rectangles of the *abscissa* by another line, compounded of the *abscissa* and the transverse axis.

But it must be remembered, that the two proportions relating to the ellipsis and hyperbola, the origin of the *abscissas*, or point from whence they began to be reckoned, is supposed to be the vertex of the curve, or, which amounts to the same thing, the point where the axis meets it; for if the origin of the *abscissa* be taken from the centre, as is often done, the above proportions will not be true

ABSENT, a term used in military returns. It forms a part of regimental reports, to account for the deficiency of any given number of officers or soldiers; and is usually distinguished under two principal heads, viz.

ABSENT *with leave*, officers with permission, or non-commissioned officers and soldiers on furlough.

ABSENT *without leave*. Men who desert are frequently reported *absent without leave*, for the specific purpose of bringing their crime under regimental cognizance, and to prevent them from being tried capitally, for desertion.

ABSOLUTE *Gravity*, in philosophy, is the whole force by which a body, shell, or shot, is impelled towards the centre. See GRAVITY.

ABSOLUTE *Number*, in Algebra, is the known quantity which possesses entirely one side of the equation. Thus, in the equation, $xx + 10x, = 64$, the number 64, possessing entirely one side of the equation, is called the *absolute number*, and is equal to the square of the unknown root x, added to $10x$, or to 10 times x.

ABUTMENT. See Bridges.

ACADEMY, in antiquity, the name of a villa situated about a mile from the city of Athens, where Plato and his followers assembled for conversing on philosophical subjects; and hence they acquired the name of *Academics*.

The term *Academy* is frequently used among the moderns for a society, of learned persons, instituted for the cultivation and improvement of arts or sciences. Some authors confound *academy* with university; but, though much the same in Latin, they are very different things in English. An university is, properly, a body composed of graduates in the several faculties; of professors, who teach in the public schools; of regents or tutors, and students who learn under them, and aspire likewise to degrees; whereas an *academy* was originally not intended for teaching, or to profess any art, but to improve it; it was not for novices to be instructed in, but for those who were more knowing; for persons of distinguished abilities to confer in, and communicate their lights and discoveries to each other, for their mutual benefit and improvement. The first *academy* we read of, was established by Charlemagne, by the advice of Alcuin: it was composed of the chief wits of the court, the emperor himself being a member.

Military Academy. There are in England two royal military academies, one at Woolwich, and one at Portsmouth. The first was established by king George II. in 1741, endowed, and supported, for the instructing of the people belonging to the military branch of ordnance, in the several parts of mathematics necessary to qualify them for the service of the artillery, and the business of engineers. The lectures of the masters in theory were then duly attended by the practitioner-engineers, officers, serjeants, corporals, private men, and cadets. At present the gentlemen educated at this academy are the sons of the nobility and military officers. They are called gentlemen cadets, and are not admitted under 14 and not above 16 years of age. They are taught writing, arithmetic, algebra, Latin, French, mathematics, mechanics, surveying, levelling, and fortification, together with the attack and defence; gunnery, mining, laboratory works, geography, perspective, fencing, dancing, &c. The master-general of the ordnance is always captain of the company of gentlemen cadets, and some officer of merit is always captain-lieutenant. There is, besides, a first lieutenant, and two second lieutenants. They are further under the immediate care of a lieutenant-governor, and an inspector, who are officers of great abilities and experience; and the professors and masters are men of known talents and capacity. That at Portsmouth was founded by George I. in 1722, for teaching of the branches of the mathematics which more immediately relate to navigation.

For the American and French *Military Academies*, see School.

ACANZI, in military history, the name of the Turkish light-horse that form the van-guard of the Grand Signior's army on a march.

ACCELERATED *Motion on oblique or inclined planes*. See Motion.

Accelerated *Motion of pendulmus.* See Pendulums.

Accelerated *Motion of Projectiles*. See Projectiles.

ACCENDONES, in military antiquity, a kind of gladiators, or supernumeraries, whose office was to excite and animate the combatants during the engagement.

ACCENSI, in antiquity, were officers attending the Roman magistrates; their business was to summon the people to the public games, and to assist the prætor when he sat on the bench.

Accensi, in military antiquity, was also an appellation given to a kind of adjutants appointed by the tribune to assist each centurion and decurion. According to Festus, they were supernumerary soldiers, whose duty it was to attend their leaders, and supply the places of those who were either killed or wounded. Livy mentions them as irregular troops, but little esteemed. Salmasius says, they were taken out of the fifth class of the poor citizens of Rome.

ACCESSIBLE, that which may be approached. We say, in a military stile, that place, or that fortress, is *accessible* from the sea, or land, i. e. it may be entered on those sides.

An accessible height or distance, in geometry, is that which may be measured by applying a rule, &c. to it: or rather, it is a height, the foot whereof may be approached, and from whence any distance may be measured on the ground.

Heights, both accessible, and inaccessible, may be taken with a quadrant. See Altitude; and the article on Field Fortifications in the *American Military Library*, Theorem 11, 12, 13, 14, 15

One of the objects of surveying, is the measuring both accessible and inaccessible distances.

ACCLIVITY, in a military sense, is the steepness or slope of any work, inclined to the horizon, reckoned upwards. Some writers on fortification use acclivity as synonymous with *talus*; though *talus* is commonly used to denote all manner of slopes, either in its ascendent or descendent state.

ACCONTIUM, in ancient military writers, a kind of Grecian dart or javelin, somewhat resembling the Roman *pilum*.

ACCOUTREMENTS, in a military sense, signify habits, equipage, or furniture, of a soldier, such as belts, pouches, cartridge-boxes, saddles, bridles, &c. Accoutrements should be made of stout leather, not of the spongy kind, which is always stretching, and difficult to clean. The belts are about 2½ inches broad, with two buckles to fix them to the pouch. Pouches are made of the stoutest blackened leather, especially the outside flaps, which are of such a substance as to turn the severest rain. Cartridge-boxes are made as light as possible, with holes in each, to hold cartridges. See CARTRIDGE.

ACLIDES, in Roman antiquity, a kind of missive weapon, with a thong fixed to it, whereby it might be drawn back again. Most authors describe the *aclides* as a sort of dart or javelin: but Scaliger makes it roundish or globular, with a wooden stem to poise it by.

ACOLUTHI, in military antiquity, was a title in the Grecian empire, given to the captain or commander of the *varangi*, or body-guards, appointed for the security of the emperor's palace.

ACTIAN *games*, in antiquity, were games instituted, or at least restored, by Augustus, in memory of the famous victory, at Actium, over Mark Antony.

ACTIAN *years*, in chronology, a series of years, commencing with the epocha of the battle of Actium, otherwise called the æra of Augustus.

ACTION, in the military art, is an engagement between two armies, or any smaller body of troops, or between different bodies belonging thereto. The word is likewise used to signify some memorable act done by an officer, soldier, detachment or party.

ACTIVITY, in a military sense, denotes laboriousness, attention, labor, diligence and study.

ACUTE *angle*. See ANGLE.

ADACTED applies to stakes, or piles, driven into the earth by large malls shod with iron, as in securing ramparts or pontoons.

ADDICE, a sort of axe which cuts horizontally. It is sometimes called an Adze.

ADIT, a passage under ground, by which miners approach the part they intend to sap. See GALLERY.

ADJUTANT-GENERAL is a staff officer, who aids and assists a general in his laborious duties: he forms the several details of duty of the army, with the brigade-majors, and keeps an exact state of each brigade and regiment, with a roll of the lieutenant-generals, major-generals, colonels, lieutenant-colonels, and majors. He every day at head quarters receives orders from the general officer of the day, and distributes them to the majors of brigades, from whom he receives the number of men they are to furnish for the duty of the army, and informs them of any detail which may concern them. On marching days he accompanies the general to the ground of the camp. He makes a daily report of the situation of all the posts placed for the safety of the army, and of any changes made in their posts. In a day of battle he acts as aid to the general. In a siege he visits the several posts and guards of the trenches, and reports their situation, and how circumstanced: he gives and signs all orders for skirmishing parties (if time permit) and has a serjeant from each brigade to carry any orders which he may have to send. See *American Mil. Lib.* Article STAFF.

ADJUTANT, an officer who aids the major in part of his duty, and performs it in his absence. He receives orders from the brigade-major, if in camp; and when in garrison, from the town-major: after he has carried them to his colonel or officer commanding the regiment, he then assembles the serjeant-major, drum-major and fife-major, with a serjeant and corporal of each company, who write the orders in an orderly book, to shew to their respective officers. If convoys, parties, detachments, or guards, are to be furnished, he gives the number which each company is to furnish, and hour and place for the assembling: he must keep an exact roster and roll of duties, and have a perfect knowlege of all manœuvres, &c. This post is usually given to an active subaltern.

ADMIRAL, on the European establishments, when on shore, are entitled to receive military honors, and rank with generals in the army.

ADVANCE. See PAY in Advance.

ADVANCED signifies some part of an army in front of the rest, as in *advanced guards*, which always precede the line of march or operations of a body of troops; again, as when a battalion, or guns of a second line are brought up in front and before the first line. This term also applies to the promotions of officers and soldiers.

ADVANCED { *Fossé-* } { See FORTIFICATION.
{ *Ditch* }
{ *Guard*. See GUARD.

ADVANCEMENT, in a military sense, signifies honor, promotion, or preferment, in the army, regiment or company.

ADVANTAGE *Ground*, a ground that gives superiority, or an opportunity of annoyance or resistance.

ADVICE-*Boat*, a vessel employed for intelligence.

ADVOCATE *General*. See JUDGE *Martial*.

ÆNEATORES, in military antiquity, the musicians in an army; including those who sounded the trumpets, horns, *litui*, *buccinæ*, &c.

AFFAIR, in the military acceptation of the word, means any slight action or engagement.

AFFAIR *of Honor*, a duel.

AFFAMER, *une Place*, Fr. to besiege a place so closely as to starve the garrison and inhabitants. See BLOCKADE.

AFFIDAVIT, in military law, signifies an oath taken before some person who is properly authorised to administer it; as first, when a soldier is inlisted, when it is stiled an attestation; secondly, by all officers appointed on a court-martial; thirdly, by the commissaries, or muster-masters.

AFFRONTER, *Fr.* to encounter or attack boldly.

AFFUT, the French name for a gun-carriage, and for which we have no appropriate name; the only distinction from all other carriages is, that it belongs to a gun. See CARRIAGE.

AGA, in the Turkish army, is the same as a general with us.

AGE. A young man must be 14 years old before he can become an officer in the English army, or be entered as a cadet at Woolwich, in the English academy.

Persons are enlisted for soldiers from 17 to 45. After the latter age, every inhabitant is exempted from serving in the British militia.

By a late regulation in England, growing boys may be enlisted under 16 years of age. These recruits are chiefly intended for the East-India service.

In the United States 18 to 45 is the legal age for militia and regulars.

The Romans were obliged to enter themselves in the army at the age of 17 years; at 45 they might demand their dismission. Amongst the Lombards, the age of entry was between 18 and 19; among the Saxons, at 13.

AGEMA, in the ancient military art, a kind of soldiery chiefly in the Macedonian armies. The word is Greek, and literally denotes vehemence, to express the strength and eagerness of this corps. Some authors will have *agema* to denote a certain number of picked men, answering to a legion among the Romans.

AGENCY, a certain proportion of money which is ordered to be subtracted from the pay and allowances of the British army, for transacting the business of the several regiments composing it.

AGENT, a person in the civil department of the British army, between the paymaster-general and the paymaster of the regiment, through whom every regimental concern of a pecuniary nature must be transacted. He gives security to government for all monies which pass through his hands in the capacity of an Agent—and by the Mutiny Act, it was provided, That if an Agent shall withhold the Pay of Officers or Soldiers for the Space of one Month, he should be dismissed from his Office and forfeit 100*l*.

The army agency has since been incorporated with the British war office, and forms a special department.

Military AGENT in the United States is a civil officer whose duty is the transporting of clothing and other articles; and the expenditures for other services attached to the military department; they act under direct orders from the War Department.

AGGER, in ancient military writers, denotes the middle part of a military road, raised into a ridge, with a gentle slope on each side, to make a drain for the water, and keep the way dry.

AGGER is also used for the whole road, or military way. Where highways were to be made in low grounds, as between two hills, the Romans used to raise them above the adjacent land, so as to make them of a level with the hills. These banks they called *aggeres*. Bergier mentions several in the *Gallia Belgica*, which were thus raised 10, 15, or 20 feet above ground, and 5 or 6 leagues long. They are sometimes called *aggeres calceati*, or causeways.

AGGER, also, denotes a work of fortification, used both for the defence and the attack of towns, camps, &c. in which sense *agger* is the same with what was otherwise called *vallum*, and in later times, *agestum*: and among the moderns, *lines*; sometimes, *cavaliers*, *terrasses*, &c.

The *agger* was usually a bank, or elevation of earth, or other matter, bound and supported with timber; having sometimes turrets on the top, wherein the workmen, engineers, and soldiery, were placed. It had also a ditch, which served as its chief defence. The height of the *agger* was frequently equal to that of the wall of the place. Cæsar tells us of one he made, which was 30 feet high, and 330 feet broad. Besides the use of *aggers* before towns, they generally used to fortify their camps with them; for want of which precaution, divers armies have been surprised and ruined.

There were vast *aggers* made in towns and places on the sea-side, fortified with towers, castles, &c. Those made by Cæsar and Pompey, at Brundusium, are famous. Sometimes *aggers* were even built across arms of the sea, lakes, and morasses; as was done by Alexander before Tyre, and by M. Antony and Cassius.

The wall of Severus, in the north of England, may be considered as a grand *agger*, to which belong several lesser ones. Besides, the principal *agger* or *vallum*, on the brink of the ditch, Mr. Horsley describes another on the south side of the former, about 5 paces distant from it, which he calls the south *agger*; and another larger one, on the north side of the ditch, called the north *agger*. This latter he conjectures to have served as a military way; the former, probably, was made for the inner defence, in case the enemy should beat them from any part of the principal *vallum*, or to protect the soldiers against any sudden attack from the provincial Britons.

AGGER *Tarquinii*, was a famous fence built by Tarquinius Superbus, on the east side of Rome, to stop the incursions of the Latins, and other enemies, whereby the city might be invested.

Agger is also used for the earth dug out of a ditch or trench, and thrown up on the brink of it: in which sense, the Chevalier Folard thinks the word to be understood, when used in the plural number, since we can hardly suppose they would raise a number of cavaliers, or terrasses.

Agger is also used for a bank or wall, erected against the sea, or some great river, to confine or keep it within bounds; in which sense, *agger* amounts to the same with what the ancients called *tumulus* and *moles;* the Dutch, *dyke;* and we, *dam*, *sea-wall;* the Asiatics call them *bunds*, &c.

AGIADES, in the Turkish armies, are a kind of pioneers, or rather field engineers, employed in fortifying the camp, &c.

AGUERRI, *Fr.* an officer or soldier experienced in war; a veteran.

AIDE-DE-CAMP, an officer appointed to attend a general officer, in the field, in winter-quarters, and in garrison; he receives and carries the orders, as occasion requires. He is taken from the line, and all aids-de-camp have extra pay allowed for their duty. This employment is of greater importance than has been generally believed: it has been, however, too often entrusted to young officers of little experience, and of as little capacity; but in the French service they bestow great attention on this article. Marshal de Puysegur mentions the loss of a battle through the incapacity of an aide-de-camp. On the English establishment, generals, being field marshals, have *four*, lieutenant-generals *two*, and major-generals and brigadier-generals *one*.

In the United States the number is established by law; though on service the number must necessarily be equal to the exigency, or the various points to which orders must be sent. See *American Mil. Lib* Article Staff.

AIDE *du Parc des Vivres*, Fr. an officer in France, acting immediately under the commissary of stores and provisions.

AID-MAJOR. See Adjutant.

AIGREMORE, a term used by the artificers in the laboratory, to express the charcoal in a state fitted for the making of powder.

AIGUILLE, an instrument used by engineers to pierce a rock for the lodgement of powder, as in a mine; or to mine a rock, so as to excavate and make roads.

AILE, *Fr.* a wing or flank of an army or fortification.

AIM, the act of bringing the musquet, piece of ordnance, or any other missive weapon, to its proper line of direction with the object intended to be struck.

AIM FRONTLET, a piece of wood hollowed out to fit the muzzle of a gun, to make it of an equal height with the breech, formerly made use of by the gunners, to level and direct their pieces. It is not used at present.

AIR-GUN, a pneumatic machine for exploding bullets, &c. with great violence.

The common air-gun is made of brass, and has two barrels: the inside barrel is of a small bore, from whence the bullets are exploded; and a large barrel on the outside of it. There is likewise a syringe fixed in the stock of the gun, by which the air is injected into the cavity between the two barrels through a valve. The ball is put down into its place in the small barrel with the rammer, as in any other gun. Another valve, being opened by the trigger, permits the air to come behind the bullet, so as to drive it out with great force. If this valve be opened and shut suddenly, one charge of condensed air may be sufficient for several discharges of bullets; but if the whole air be discharged on one single bullet, it will drive it out with uncommon force. This discharge is effected by means of a lock placed here, as usual in other guns; for the trigger being pulled, the cock will go down and drive the lever, which will open the valve, and let in the air upon the bullet: but as the expansive power of the condensed air diminishes at each discharge, its force is not determined with sufficient precision for the purposes of war. Hence it has been long out of use among military men.

In the air-gun, and all other cases where the air is required to be condensed to a very great degree, it will be necessary to have the syringe of a small bore, viz. not exceeding half an inch in diameter; because the pressure against every square inch is about 15 pounds, and therefore against every circular inch about 12 pounds. If therefore the syringe be one inch in diameter, when the atmosphere is injected, there will be a resistance of 12 pounds against the piston; and when 10 are injected, there will be a force of 120 pounds to be overcome; whereas 10 atmospheres act against the circular half-inch piston (whose area is only ¼ part so large) with only a force equal to 30 pounds; or 40 atmospheres may be injected with such a syringe, as well as 10 with the other. In short, the facility of working will be inversely as the squares of the diameter of the syringe.

AIR-SHAFTS, in mining. See Mining.

ALARM, is a sudden apprehension upon some report, which makes men run to their arms to stand upon their guard; it implies either the apprehension of being suddenly attacked, or the notice given of such an attack being actually made; generally signified by the firing of a cannon, or rocket, the beat of a drum, &c.

Alarm-*Post*, in the field, is the ground appointed by the quarter-master general for each regiment to march to, in case of an alarm.

ALARM-*Post*, in a garrison, is the place allotted by the governor for the troops to draw up in, on any sudden alarm.

False-ALARMS, are stratagems of war, frequently made use of to harrass an enemy, by keeping them perpetually under arms. They are often conveyed by false reports, occasioned by a fearful or negligent sentinel. A vigilant officer will sometimes make a false alarm, to try if his guards are strict upon duty.

ALARM-*Bell*, the bell rung upon any sudden emergency, as a fire, mutiny, approach of an enemy, or the like, called by the French, Tocsin.

ALCANTARA, knights of a Spanish military order, who gained a great name during the wars with the Moors.

ALERT, originally derived from the French word *alerte*, which is formed of *a* and *airte*. The French formerly said *airte* for *air;* so that *alerte* means something continually in the air, and always ready to be put in action. A general is said to be *alert* when he is particularly vigilant.

To be kept upon the alert, is to be in continual apprehension of being surprised. *Alerte*, among the French, is an expression which is used to put soldiers upon their guard. It is likewise used by a post that may be attacked in the night, to give notice to the one that is destined to support it; and by a sentry to give warning when any part of the enemy is approaching. *We have had an alert*, is a military phrase.

ALGEBRA, a peculiar kind of arithmetic, in which every military man ought to be versed, but which is indispensibly necessary for officers in the ordnance department.

ALIEN, in law, implies a person born in a foreign country, in contradistinction to a natural born or naturalized person.

ALIGNEMENT, implies any thing strait—For instance, the *alignement* of a battalion means the situation of a body of men when drawn up in line. The *alignement* of a camp signifies the relative position of the tents, &c. so as to form a strait line, from given points.

ALLAY. See ALLOY.

ALLÆ, in the ancient military art, the two wings or extremes of an army ranged in order of battle.

ALLEGIANCE, in law, implies the obedience which is due to the laws.

Oath of ALLEGIANCE, is that taken by an alien, by which he adopts America and renounces the authority of a foreign government. It is also applied to the oath taken by officers and soldiers in pledge of their fidelity to the state.

ALLEGIANT, loyal, faithful to the laws.

ALLEZER, to cleanse the mouth of a cannon or other piece of ordnance, and to increase the bore, so as to produce its determined calibre.

ALLEZOIR, a frame of timber firmly suspended in the air with strong cordage, on which is placed a piece of ordnance with the muzzle downwards. In this situation the bore is rounded and enlarged by means of an instrument which has a very sharp and strong edge made to traverse the bore by the force of machinery or horses, and in an horizontal direction.

ALLEZURES, the metal taken from the cannon by boring.

ALLIAGE, a term used by the French to denote the composition of metals used for the fabrication of cannon and mortars, &c.

ALLIANCE, in a military sense, signifies a treaty entered into by sovereign states, for their mutual safety and defence. In this sense alliances may be divided into such as are offensive, where the contracting parties oblige themselves jointly to attack some other power; and into such as are defensive, whereby the contracting powers bind themselves to stand by, and defend one another, in case of being attacked by any other power.

Alliances are variously distinguished, according to their object, the parties in them, &c. Hence we read of equal, unequal, triple, quadruple, grand, offensive, defensive *alliances*, &c.

ALLODIAL, independent; not feudal. The Allodii of the Romans were bodies of men embodied on any emergency, in a manner similar to our volunteer associations.

ALLOGNE, the cordage used with floating bridges, by which they are guided from one side of a river to the other.

ALLONGE, *Fr.* a pass or thrust with a rapier or small sword; also a long rein used in the exercising of horses.

ALLOY, is the mixture of metals that enter into the composition of the metal proper for cannon and mortars.

ALLY, in a military sense, implies any nation united to another—under a treaty, either offensive or defensive, or both.

ALMADIE, a kind of military canoe, or small vessel, about 24 feet long, made of the bark of a tree, and used by the negroes of Africa.

ALMADIE, is also the name of a long-boat used at Calcutta, often 80 to 100 feet long, and generally six or seven broad, they row from ten to thirty oars.

ALTIMETRY, the taking or measuring altitude, or heights.

ALTITUDE, height, or distance from the ground, measured upwards, and may be both accessible, and inaccessible.

ALTITUDE *of a figure*, is the distance of its vertex from its base, or the length of a perpendicular let fall from the vertex to the base. See *American Mil. Lib.* Art. FIELD FORTIFICATION.

ALTITUDE *of a shot or shell*, is the perpendicular height of the vertex above the horizon. See GUNNERY and PROJECTILES.

ALTITUDE, *in optics*, is usually considered as the angle subtended between a line drawn through the eye, parallel to the horizon, and a visual ray emitted from an object to the eye.

Altitude, *in cosmography*, is the perpendicular height of an object, or its distance from the horizon upwards.

Altitudes are divided into *accessible* and *inaccessible*.

Accessible Altitude *of an object*, is that whose base you can have access to, i. e. measure the nearest distance between your station and the foot of the object on the ground.

Inaccessible Altitude *of an object*, is that when the foot or bottom of it cannot be approached, by reason of some impediment; such as water, or the like. The instruments chiefly used in measuring of *altitudes*, are the quadrant, theodolite, geometric quadrant, cross, or line of shadows, &c.

Altitude *of the eye*, in perspective, is a right line let fall from the eye, perpendicular to the geometrical plane.

Altitude *of motion*, a term used by some writers, to express the measure of any motion, computed according to the line of direction of the moving force.

AMAZON, one of those women who are fabled to have composed a nation of themselves, exclusive of males, and to have derived their name from their cutting off one of their breasts, that it might not hinder or impede the exercise of their arms. This term has often by modern writers been used to signify a bold daring woman, whom the delicacy of her sex does not hinder from engaging in the most hazardous attempts. The recent and former wars with France have furnished several instances of females who have undergone the fatigue of a campaign with alacrity, and run the hazards of a battle with the greatest intrepidity. Several cases occurred also in the American Revolution.

AMBIT, the compass or circuit of any work or place, as of a fortification or encampment, &c.

AMBITION, in a military sense, signifies a desire of greater posts, or honors. Every person in the army or navy, ought to have a spirit of emulation to arrive at the very summit of the profession by his personal merit.

AMBUSCADE, in military affairs, implies a body of men posted in some secret or concealed place, 'till they find an opportunity of falling upon the enemy by surprise; or, it is rather a snare set for the enemy, either to surprise him when marching without precaution; or by posting your force advantageously, and drawing him on by different stratagems, to attack him with superior means. An ambuscade is easily carried into execution in woods, buildings, and hollow places; but requires a more fertile imagination, and greater trouble, in a level country.

AMBUSH, a place of concealment for soldiers to surprise an enemy, by falling suddenly upon him.

AME, a French term, similar in its import to the word *chamber*, as applied to cannon, &c.

AMENDE *honorable*, in the old armies of France, signified an apology for some injury done to another, or satisfaction given for an offence committed against the rules of honor or military etiquette; and was also applied to an infamous kind of punishment inflicted upon traitors, parricides, or sacrilegious persons, in the following manner: the offender being delivered into the hands of the hangman, his shirt stripped off, a rope put about his neck, and a taper in his hand; then he was led into court, where he begged pardon of God, the court, and his country Sometimes the punishment ended there; but sometimes it was only a prelude to death, or banishment to the gallies. It prevails yet in some parts of Europe.

AMMUNITION, implies all sorts of powder and ball, shells, bullets, cartridges, grape-shot, tin, and case-shot; carcasses, granades, &c.

Ammunition, or *gun-powder*, may be prohibited to be exported.

Ammunition, *for small arms*, in the British service, is generally packed in half barrels, each containing 1000 musket, or 1500 carbine cartridges. An ammunition waggon will carry 20 of these barrels, and an ammunition cart 12 of them: their weight nearly 1 cwt. each.

The cartouch boxes of the infantry are made of so many different shapes and sizes, that it is impossible to say exactly what ammunition they will contain; but most of them can carry 60 rounds. See the word *Cartridges*; and for artillery ammunition, see the word *Artillery*, for the field, for the siege, and the defence of a fortified place.

The French pack all their ammunition in waggons without either boxes or barrels, by means of partitions of wood. Their 12 Pr. and 8 Pr. waggons will contain each 14,000 musket cartridges, but their 4 Pr. waggons will contain only 12,000 each.

Ammunition *bread*, such as is contracted for by government, and served in camp, garrison, and barracks.

Ammunition *shoes*, *stockings*, *shirts*, *stocks*, &c. such of those articles as are served out to the private soldiers, by government. See Half-Mountings.

Ammunition *waggon*, is generally a four-wheel carriage with shafts; the sides are railed in with staves and raves, and lined with wicker-work, so as to carry bread and all sorts of tools. It is drawn by four horses, and loaded with 1200 pound weight. See Waggon.

Ammunition-*cart*, a two-wheel carriage with shafts; the sides of which, as well as the fore and hind parts, are inclosed with boards instead of wicker-work. See Caisson.

AMMUZETTE. See the word Guns.

AMNESTY, in a military or political sense, is an act by which two belligerent powers at variance promise to forget and bury in oblivion all that is past.

Amnesty is either general and unlimited, or particular and restrained, though most commonly universal, without conditions or exceptions: such as that which passed in Germany at the peace of Osnaburg in the year 1648, and between the United States and Great Britain, in 1783.

Amnesty, in a more limited sense, denotes a pardon to persons rebellious, usually with some exceptions; such as was granted by Charles II. at his restoration.

AMNISTIE, *Fr.* See Amnesty.

AMORCE, an old military word for fine-grained powder, such as is sometimes used for the priming of great guns, mortars or howitzers; as also for small-arms, on account of its rapid inflammation. A port fire, or quick match.

AMPLITUDE *of the range of a projectile.* See Projectile.

AMPOULETTE, an old military term used by the French to express the stock of a musket, &c.

AMUSETTE, a species of offensive weapon which was invented by the celebrated Marshal Saxe. It is fired off in the same manner as a musquet, but is mounted nearly like a cannon. It has been found of considerable use during the war of the French revolution, especially among the French, who armed some of their horse artillery with it, and found it superior to the one adopted by the Prussians from Marshal Saxe.

ANABASII, in antiquity, were expeditious couriers, who carried dispatches of great importance, in the Roman wars.

ANACLETICUM, in the ancient art of war, a particular blast of the trumpet, whereby the fearful and flying soldiers were rallied and recalled to the combat.

ANCIENT, a term, used formerly to express the grand ensign or standard of an army.

ANCILE, in antiquity, a kind of shield, which fell, as was pretended, from heaven, in the reign of Numa Pompilius; at which time, likewise, a voice was heard, declaring, that Rome would be mistress of the world as long as she should preserve this holy buckler.

Authors are much divided about its shape: however, it was kept with great care in the temple of Mars, under the direction of twelve priests; and lest any should attempt to steal it, eleven others were made so like it, as not to be distinguished from the sacred one. These *Ancilia* were carried in procession every year round the city of Rome.

ANDABATÆ, in military antiquity, a kind of gladiators, who fought hoodwinked; having a sort of helmet that covered the eyes and face. They fought mounted on horse-back, or on chariots.

St. **ANDREW**, *or the Thistle*, a nominally military order of knighthood in Scotland. The occasion of instituting this order is variously related.

In 819, Achaius, king of Scotland, having formed a league, offensive and defensive, with Charlemagne, against all other princes, found himself thereby so strong, that he took for his device the *Thistle* and the *Rue*, which he composed into a collar of his order, and for his motto, *Pour ma defense;* intimating thereby, that he feared not the powers of foreign princes, seeing he leaned on the succour and alliance of the French. And though from hence may be inferred, that these two plants, the Thistle and the Rue, were the united symbols of one order of knighthood, yet Menenius divides them into two; making one whose badge was the thistle, whence the knights were so called; and the motto, *Nemo me impune lacessit;* another vulgarly called *Sertum rutæ*, or the garland of rue; the collar of which was composed of two branches or sprigs thereof, or else of several of its leaves: at both these collars hung one and the same jewel, to wit, the figure of St. Andrew, bearing before him the cross of his martyrdom.

But though the thistle has been acknowleged for the badge and symbol of the kingdom of Scotland, even from the reign of Achaius, as the rose was of England, and the lily of France, the pomegranate of Spain, &c.; yet there are some who refer the order of the thistle to later times, in the reign of Charles VII. of France; when the league of amity was renewed between that kingdom and Scotland, by which the former received great succour from the latter, at a period of extraordinary distress. Others again place the foundation still later, even as low as the year 1500; but without any degree of certainty.

The chief and principal ensign of this order is a gold collar, composed of thistles, interlinked with annulets of gold, having pendent thereto the image of St Andrew with his cross, and this motto, *Nemo me impune lacessit.*

Knights of St. Andrew, is also a nominal military order instituted by Peter III. of Muscovy, in 1698; the badge of which is a golden medal, on one side whereof is represented St. Andrew's cross; and on the other are these words, *Czar Pierre monarque de toute la Russie.* This medal, being fastened to a blue ribbon, is suspended from the right shoulder.

ANGARIA, in ancient military writers, means a guard of soldiers posted in any place for the security of it. Vide Vegetius, lib. i. c. 3. lib. ii. c. 19. lib. iii. c. 8.

Angaria, in civil law, implies a service by compulsion, as furnishing horses and carriages for conveying corn or other stores for the army.

ANGE, a term used by the French to express chain shot.

ANGEL *Shot*. See Chain-Shot.

ANGLE, in geometry, is the inclination of two lines meeting one another in a point.

Sometimes angles are denoted by a single letter placed at the point of intersection; but when several lines meet at the same point, each particular angle is denoted by three letters, whereof the middle letter shews the angular point, and the other two letters the lines which form that angle.

The measure of an angle is the arch of a circle, described on the angular point, intercepted between the two lines which form the angle, and as many degrees, &c. as are contained in that arch, so many degrees, &c. the angle is said to consist of.

Angles are either *right*, *acute*, or *obtuse*.

A Right Angle, is that whose two legs are perpendicular to each other; and consequently the arch intercepted between them is exactly 90° or the quarter of a circle.

An Acute Angle, is that which is less than a right angle, or 90°.

An Obtuse Angle, is that which is greater than a right angle.

Adjacent Angles, are such as have the same vertex, and one common side contained beyond the angular point. The sum of the adjacent angles is always equal to two right angles (13. *Eucl.* 1.) and therefore, if one of them be acute, the other will be obtuse; and the contrary: whence, if either of them be given, the other is also given, it being the complement of the former to 180°.

Homologous Angles in similar figures are such as retain the same order, reckoning from the first in both figures.

Vertical Angles, are the opposite angles made by two lines cutting or crossing each other. When two lines cut or cross each other, the vertical angles are equal (15 *Eucl.* 1.)

Alternate Angles, are those cut or obtuse angles made by two lines cutting or crossing each other, and formed by a right line cutting or crossing two parallel lines. Alternate angles are always equal to each other (18. *Eucl.* 1.)

A rectilineal or right lined Angle, is made by strait lines, to distinguish it from the spherical or curvilineal angle.

Angles *of contact*. Angles of contact may be considered as true angles, and should be compared with one another, though not with right lined angles as being infinitely smaller.

Angle *of elevation*, in gunnery, is that which the axis of the hollow cylinder, or barrel of the gun, makes with a horizontal line. See Elevation.

Angles *oblique* are those which are greater than right angles.

Spherical Angle, is an angle formed by the intersection of two great circles of the sphere. All spherical angles are measured by an arch of a great circle described on the vertex as a pole, and intercepted between the legs which form the angle.

Angle *lunular* is an angle formed by the intersection of two curves, the one concave and the other convex.

Mixed-line Angle, is that comprehended between a right line and a curved line.

Curved-line Angle, is that intercepted between two curved lines meeting each other in one point, in the same plane.

Angle *of a semi-circle* is that which the diameter of a circle makes with the circumference.

Angle *of Incidence*, is that which the line of direction of a ray of light, &c. makes at the point where it first touches the body it strikes against, with a line erected perpendicular to the surface of that body.

Angle *of interval* between two places is that formed by two lines directed from the eye to those places.

Angle *of Reflection*, is the angle intercepted between the line of direction of a body rebounding, after it has struck against another body, and a perpendicular erected at the point of contact.

Angle *at the centre*, in fortification, is the angle formed at the middle of the polygon, by lines drawn from thence to the points of the two adjacent bastions.

Angle *of the curtain*, } That which is
Angle *of the flank*, }
made by, and contained between the curtain and the flank.

Angle *of the polygon*, that which is made by the meeting of the two sides of the polygon, or figure in the centre of the bastion. See Fortification.

Angle *of the triangle*, is half the angle of the polygon.

Angle *of the bastion*, or } That which
Flanked Angle, } is made by
the two faces, being the utmost part of the bastion most exposed to the enemy's batteries, frequently called the point of the bastion. See Fortification.

Diminished Angle, only used by some engineers, especially the Dutch, is composed of the face of the bastion, and the exterior side of the polygon.

Angle *of the shoulder*, or } Is formed
Angle *of the épaule*, } by one
face, and one flank of the bastion. See Fortification.

Angle *of the tenaille*, } Is made by two
Angle *rentrant*, } lines fichant,
that is, the faces of the two bastions extended till they meet in an angle towards the curtain, and is that which always carries its point towards the out-works. See Fortification.

Angle *of the flank exterior*, is that which is before the centre of the curtain, formed by the prolongation of the faces of the bastion, or by both the fichant lines of defence, intersecting each other on planning a fortification.

Angle *of the flank interior*, is formed by the flanked line of defence and the curtain; being that point where the line of defence falls upon the curtain.

Angle *of the line of defence*, is that angle made by the flank, and the line of defence.

Angle *of the face*, is formed by the angle of the face and the line of defence produced till they intersect each other.

Angle *of the base interior*, is the half of the figure, which the interior polygon makes with the radius, when they join each other in the centre; intersecting the centre of the gorges of each bastion.

Angle *of the base exterior*, is an angle formed by lines drawn from the centre of the figure, to the angle of the exterior polygon, cutting the centre of the gorges of each bastion.

Angle *of the gorge*, is that angle formed by the prolongation of the curtains, intersecting each other, in the centre of the gorge, through which the capital line passes.

Angle *of the ditch*, is formed before the centre of the curtain, by the outward line of the ditch.

Angle *of the mole*, is that which is made before the curtain where it is intersected.

Flanked Angle. See Angle *of the bastion*.

Saliant Angle, } Is that angle which
Angle *sortant*, } points outwards, or towards the country. Such is the angle of the counterscarp before the point of a bastion.

Entering Angle, or } An angle point-
Angle *rentrant*, } ing inwards, as the saliant angle does outwards. Such is the angle of the counterscarp before the curtain.

Angle *of the counterscarp*, made by two sides of the counterscarp, meeting before the centre of the curtain.

Angle *at the circumference of a circle*, is an angle formed by two chords in the circumference of a circle.

Angle *of the circumference*, is the mixed angle formed by an arch, drawn from one gorge to another.

Re-entering Angle. See *Entering* Angle.

Angle *of the complement of the line of defence*, is the angle formed by the intersection of the two complements with each other.

Angles *of a battalion*, are made by the last men at the extremity of the ranks and files.

Front Angles, the two last men of the front rank.

Rear Angles, the two last men of the rear rank.

Dead Angle, is a re-entering angle, consequently not defended.

Angular, in a general sense, denotes something relating to angles, or that hath angles.

ANGON, in ancient military history, was a kind of dart of a moderate length, having an iron bearded head and cheeks; in use about the fifth century. This sort of javelin was much used by the French. The iron head of it resembles a fleur-de-lis; and it is the opinion of some writers, that the old arms of France were not fleurs-de-lis, but the iron point of the *angon* or javelin of the ancient French.

To ANIMATE, in a military sense, is to encourage, to incite, to add fresh impulse to any body of men who are advancing against an enemy, or to prevent them from shamefully abandoning their colours in critical situations. Soldiers may be encouraged and incited to gallant actions not only by words, but by the looks and gestures of the officers, particularly of their commanding one. It is by the latter alone, indeed, that any of these artificial means should be resorted to; for silence, steadiness, and calmness are the peculiar requisites in the characters of subordinate officers. Whatever their private feelings may be, a superior sense of duty should always prevent them from discovering the slightest symptom of perturbation The best effects, however, may be sometimes produced by a sort of electrical shock which is communicated to the soldiery: as, when officers, being themselves animated and full of fire, give a sudden and unexpected utterance to their sentiments; make use of some particular expression by which the national ear is captivated, or by a happy waving of the hand, hat, or sword cause the most timid to become careless of danger, and keep up the enthusiasm of the bravest. Many battles, both in ancient and modern times, have taken a sudden turn from the most trivial circumstance of this nature.

The French are very susceptible of this species of animation. During the present war they have furnished several instances of the power of military animation. The success at Lodi, to which Bonaparte owes so much of his reputation, was the consequence of a bold and individual exertion, when he snatched the standard, and personally led the grenadiers across the bridge. A variety of instances might be enumerated wherein words and gestures have had the most happy result. As far back as the days of Cæsar there are examples that stand fresh upon record; and nothing proves more forcibly the influence which a great reputation has upon common minds, than the exclamation which Cæsar used when he was crossing a branch of the sea, between Brundusium and Dyrrachium. He embarked by night in the habit of a slave, and lay on the boards like an ordinary passenger. As they were to sail down the river Annius a violent storm arose, which quite overcame the art of the pilot, who gave orders to put back; but this, Cæsar would not permit, who discovering himself, and taking the astonished pilot by the hand, bade him boldly go on and fear nothing, *for*, cried he, *thou carriest Cæsar and Cæsar's fortune.* "*Cæsarem vehis fortunamque ejus.*"

ANNALS, a species of military history, wherein events are related in the chronological order they happened. They differ from a perfect history, in being only a mere relation of what passes every year, as a journal is of what passes every day.

ANNUNCIADA, an order of military knighthood in Savoy, first instituted by Amadeus I. in the year 1409; their collar was of 15 links, interwoven one with another, and the motto *F. E. R. T.* signifying *fortitudo ejus Rhodum tenuit.* Amadeus VIII. changed the image of St. Maurice, patron of Savoy, which hung at the collar, for that of the Virgin Mary; and instead of the motto abovementioned, substituted the words of the angel's salutation. Now extinct.

ANOLYMPIADES. See OLYMPIAD.

ANSE *des Pieces*, a French term for the handles of cannon. Those of brass have two—Those of iron seldom any—these handles serve to pass cords, handspikes, or levers, the more easily to move so heavy a body, and are made to represent dolphins, serpents, &c.

ANSPESADE. See LANCE CORPORAL.

ANTEMURAILLE, in the ancient military art, denoted what now the moderns generally call the outworks.

ANTESTATURE, in ancient fortification, signifies an intrenchment of pallisades or sacks of earth, thrown up in order to dispute the remainder of a piece of ground.

ANTHONY, or *Knights of St. Anthony*, a military order instituted by Albert, duke of Bavaria, Holland, and Zealand, when he designed to make war against the Turks in 1382. The knights wore a collar of gold made in the form of a hermit's girdle, from which hung a stick like a crutch, with a little bell, as they are represented in St. Anthony's pictures.

APPAREILLES, are those slopes that lead to the platform of the bastion. See FORTIFICATION.

APPAREILLEUR, *Fr.* an architect who superintends the workmen in the construction of fortifications, sluices, &c.

APPEAL, might formerly have been made, by the prosecutor or prisoner, from the sentence or jurisdiction of a regimental to a general court-martial.

APPEL, *Fr.* a roll call; a beat of drum for assembling; a challenge.

APPEL, in fencing, a smart beat with your blade on that of your antagonist on the contrary side to that you have engaged, generally accompanied with a stamp of the foot, and used for the purpose of procuring an opening.

APPOINTE. This word was applicable to French soldiers only, during the old monarchy of France, and meant a man who for his long service and extraordinary bravery received more than common pay. There were likewise instances in which officers were distinguished by being stiled *officiers appointés*.

The word *appointé* was originally derived from its being said, that a soldier was appointed among those who were to do some singular act of courage, as by going upon a forlorn hope, &c.

APPOINTMENT, in a military sense, is the pay of the army; it likewise applies to warlike habiliments, accoutrements, &c.

APPREHEND, in a military sense, implies the seizing or confining of any person. According to the articles of war, every person who apprehends a deserter, and attests the fact duly before a magistrate, is entitled to receive a reward.

APPROACHES. All the works are generally so called that are carried on towards a place which is besieged; such as the first, second, and third parallels, the trenches, epaulements with and without trenches, redoubts, places of arms saps, galleries, and lodgments. See these words more particularly under the head FORTIFICATION.

This is the most difficult part of a siege, and where most lives are lost. The ground is disputed inch by inch, and neither gained nor maintained without the loss of men. It is of the utmost importance to make your approaches with great caution, and to secure them as much as possible, that you may not throw away the lives of your soldiers. The besieged neglect nothing to hinder the approaches; the besiegers do every thing to carry them on; and on this depends the taking or defending of the place.

The trenches being carried to their glacis, you attack and make yourself master of their covered-way, establish a lodgment on the counterscarp, and effect a breach by the sap, or by mines with several chambers, which blow up their intrenchments and fougades, or small mines, if they have any.

You cover yourselves with gabions, fascines, barrels, or sacks; and if these are wanting, you sink a trench.

You open the counterscarp by saps to make yourself master of it; but, before you open it, you must mine the flanks that defend it. The best attack of the place is the face of the bastion, when by its regularity it permits regular approaches and attacks according to art. If the place be irregular, you must not observe regular approaches, but proceed according to the irregularity of it; observing to humor the ground, which permits you to attack it in such a manner at one place, as would be useless or dangerous at another; so that the engineer who directs the attack ought exactly to know the he would attack, its proportions, its force and solidity, in the most geometrical manner.

APPROACHES, in a more confined sense, signify attacks.

Counter APPROACHES, are such trenches as are carried on by the besieged, against those of the besiegers.

APPRENTI, *Fr.* Apprentice.

In France they had apprentices or soldiers among the artillery, who served for less pay than the regular artillery men, until they became perfect in their profession; when they were admitted to such vacancies as occurred in their respective branches. The system is changed.

APRON, in gunnery, a square plate of lead that covers the vent of a cannon, to keep the charge dry, and the vent clean and open.

APRONS—of lead for guns, according to *Deturbie* *lbs. oz.*
Large—1 foot long—10 in. wide—8 4
Small—6 inch, —— 4½ ——— 1 12

Their dimensions are as follow, viz. for a 42, 32, and a 24 pounder, 15 inches by 13; for an 18, 12, and a 9 pounder, 12 inches by 10; for a 6, 5½, 3, and 1½ pounder, 10 inches by 8. They are tied fast by two strings of white marline, the length of which, for a 42 to a 12 pounder inclusive, is 18 feet, 9 feet each string; for a 9 to 1½ pounder, 12 feet, 6 feet for each.

APPUI—*Pointe d'appui*, or point of bearing, or direction, or support, is any particular given point or body, upon which troops are formed, or by which they are marched in line or column.

*Aller à l'*APPUI, *Fr.* to go to the assistance of any body, to second, to back.

*Hauteur d'*APPUI, *Fr.* breast-height.

AQUEDUCT, a channel to convey water from one place to another. Aqueducts, in military architecture, are generally made to bring water from a spring or river to a fortress, &c. they are likewise used to carry canals over low ground, and over brooks or small rivers: they are built with arches like a bridge, only not so wide, and are covered above by an arch, to prevent dust or dirt from being thrown into the water—there are also subterranean aqueducts, such as pipes of wood, lead, or iron. See Muller's *Practical Fortification.*

The Romans had aqueducts which extended 100 miles. That of Louis XIV. near Maintenon, which carries the river Bure to Versailles, is 7000 toises long.

ARAIGNEE, in fortification. See GALLERY

ARBALET, in the ancient art of war, a cross-bow, made of steel, set in a shaft of wood, with a string and trigger, bent with a piece of iron fitted for that purpose, and used to throw bullets, large arrows, darts, &c. Also a mathematical instrument called a *Jacob's Staff*, to measure the height of the stars upon the horizon.

ARBALETE *à jalet*, a stone bow.

ARBALETRIER, *Fr.* a cross-bow man.

ARBALETRIER *d'une Galére*, Fr. that part of a galley where the cross-bowmen were placed during an engagement.

ARBORER, *Fr.* to plant. *Arborer l'étendart*, to plant the standard.

ARC, *Fr.* a bow; an arch in building.

ARCH, in military architecture, is a vault or concave building, in form of a curve, erected to support some heavy structure, or passage.

Triumphal ARCH, in military history, is a stately monument or erection generally of a semicircular form, adorned with sculpture, inscriptions, &c. in honor of those heroes who have deserved a triumph.

ARCHERS, in military history, a kind of militia or soldiery, armed with bows and arrows. They were much used in former times, but are now laid aside, excepting in Turkey, and in some parts of Asia.

ARCHERY, is the art of shooting with a bow and arrow. The ancient English were famous for being the best archers in Europe, and most of their victories in France were the purchase of the long-bow. The statutes made in 33 Hen. VIII. relative to this exercise, are worth perusal. It was forbidden, by statute, to shoot at a standing mark, unless it should be for a rover, where the *archer* was to change his mark at every shot. Any person above 24 years old was also forbidden to shoot with any prick-shaft, or flight, at a mark of eleven score yards or under. 33 Hen. VIII. chap. 9. The former was a provision for making good marksmen at sight; the latter for giving strength and sinews. The modern rifle has rendered the bow an useless weapon.

ARCHITECTURE, in a military sense, is the art of erecting all kinds of military edifices or buildings, whether for habitation or defence.

Military ARCHITECTURE, instructs us in the method of fortifying cities, seaports, camps, buildings, powder magazines, barracks, &c. Military architecture is divided into *regular* and *irregular* fortification.

Regular fortification consists in having all its sides and angles equal among themselves.

Irregular fortification is composed of parts where the sides and angles are not equal or uniform among themselves. This species of fortification is permanent or temporary.

The permanent one is constructed for the purpose of remaining a long time, and for the protection of large towns.

The temporary one is that which is erected in cases of emergency. Under this denomination are contained all sorts of works which are thrown up to seize a pass or gain an eminence, or those which are made in circumvallations and countervallations, viz. redoubts, trenches, and batteries. See FORTIFICATION.

Field Fortification is the art of forming temporary works of defence, such as trenches, redoubts, breastworks, epaulments, *chevaux de frize*, *trous de loup*, &c. See FIELD FORTIFICATION.

Naval ARCHITECTURE, is the art of building the hull, or body of the ship, distinct from her machinery and furniture for sailing; and may properly be comprehended in three principal articles. 1. To give the ship such a figure, or outward form, as may be most suitable to the service for which she is intended. 2. To find the exact shape of the pieces of timber necessary to compose such a fabric. 3. To make convenient apartments for the artillery, ammunition, provisions, and cargo: together with suitable accommodations for the officers and men.

ARCHITRAVE, the master beam, or chief supporter, in any part of a subterraneous fortification.

AREA, the superficial content of any rampart, or other work of a fortification.

ARIGOT, *Fr.* a fife or flute.

ARM—Military writers use this word to signify a particular species of troops—thus the artillery is an arm, and the cavalry, and infantry, and rifle men are each called an arm; but this use of the word is now deemed quaint.

ARM, in geography, denotes a branch of the sea, or of a river.

ARM is also used figuratively to denote power.

To ARM, to take arms, to be provided against an enemy.

ARMADA, a Spanish term, signifying a fleet of men of war, applied particularly to that great one fitted out by the Spaniards, with an intention to conquer England in 1588, and which was first dispersed by a terrible storm, several of the ships wrecked on the coasts of England and Ireland, and many overtaken and defeated by the English fleet, under admirals Howard and Drake.

ARMADILLA, a Spanish term, signifying a small squadron.

ARMATURA, in ancient military history, signifies the fixed and established military exercise of the Romans, nearly in the sense we use the word exercise. Under this word is understood, the throwing of the spear, javelin, shooting with bows and arrows, &c.

ARMATURA is also an appellation given to the soldiers who were light-armed. Aquinus seems without reason, to restrain *armatura* to the *tyrones*, or young soldiers.

ARMATURA was also a denomination given to the soldiers in the Roman emperor's retinue.

ARMED, in a general sense, denotes something provided with, or carrying arms.

An ARMED *body of men*, denotes a military corps or detachment, provided with arms and ammunition, ready for an engagement.

ARMED, in the sea language. A crossbar-shot is said to be armed, when some rope-yarn, or the like, is rolled about the end of the iron bar which runneth through the shot.

ARMED *ship*, is a vessel taken into the public service, and equipped in time of war, with artillery, ammunition, and warlike instruments: in the British service an armed ship is commanded by an officer who has the rank of master and commander in the navy, and upon the same establishment with sloops of war, having a lieutenant, master, purser, surgeon, &c.

ARMEE, *Fr.* See ARMY.

ARMEMENT, *Fr.* a levy of troops, equipage of war, either by land or sea.

ARMES *a l'Epreuve*, a French term for armor of polished steel, which was proof against the sword or small arms; but its weight so encumbered the wearer, that modern tacticians have wholly rejected its use.

ARMES *à la légère*, Fr. light-troops, who were employed to attack in small bodies, as opportunity occurred. See RIFLEMEN, &c.

ARMES *des Pieces de Canon*, the French term for the tools used in practical gunnery, as the scoop, rammer, sponge, &c.

ARMET, *Fr.* a casque or helmet.

ARMIGER, an esquire or armor-bearer, who formerly attended his knight or chieftain in war, combat, or tournament, and who carried his lance, shield, or other weapons with which he fought.

ARMILUSTRIUM, in Roman antiquity, a feast observed among the Roman generals, in which they sacrificed, armed, to the sound of trumpets, and other warlike instruments.

ARMISTICE, a temporary truce, or cessation of arms for a very short space of time only.

ARMORY, a warehouse of arms, or a place where the military habiliments are kept, to be ready for use.

ARMOR, denotes all such habiliments as serve to defend the body from wounds, especially darts, a sword, a lance, &c. A complete suit of armor formerly consisted of a helmet, a shield, a cuiras, a coat of mail, a gantlet, &c. now almost universally laid aside.

ARMOR-BEARER, he that carries the armor of another.

ARMORER, a person who makes or deals in armor, or arms; also a person who keeps them clean.

ARMS, in a general sense, signify all kinds of weapons, whether used for offence or defence.

Fire-ARMS, are cannon, mortars, howitzers, grenades, firelocks, rifles, fusils, carbines, guns, and pistols; or any other machine discharged by inflamed powder, Arms may properly be classed under two specific heads—

Arms of offence, which include musquet, bayonet, sword, pistol, rifle, &c.

Arms of defence, which are shields, helmets, coats of mail, or any species of repulsive or impenetrable covering, by which the body of a man is protected.

Arms—Small

Nature.	Length of Barrel.		Diam. of Bore.	Balls weight for					
				Proof.			Service.		
	Ft.	In.	Inches.	oz.	dr.	gr	oz	dr.	gr.
Wall pieces	4	6	.98	2	8	8	2	5	7
Musquet	3	6	.76	1	6	11½	1	1	12
Carbine	3	0	.61	0	14	13	0	12	11
Pistol, common	1	2	.58	0	8	15	0	7	4½
Ditto, Carbine	1	0	.66	0	14	13	0	12	11
Rifle, the long	3	6	.55	0	9	0	0	8	0
Short Rifle	3	2	.58	0	10	8	0	10	0

In a legal sense, arms may extend to any thing that a man wears for his own defence, or takes in his hand, and uses in anger, to strike, throw at, or wound another. It is supposed, that the first artificial arms were of wood, and only employed against beasts; and that Belus, the son of Nimrod, was the first that waged war; whence, according to some, came the appellation *Bellum*. Diodorus Siculus takes Belus to be the same with Mars, who first trained soldiers up to battle. *Arms* of stone, and even of brass, appear to have been used before they came to iron and steel. Josephus assures us, that the patriarch Joseph first taught the use of iron arms in Egypt, arming the troops of Pharaoh with a casque and buckler.

The principal *arms* of the ancients were hatchets, scythes, lances, swords, and bucklers: the Saxons used the halberd, bow, arrows, cross-bow, &c. By the ancient laws of England, every man was obliged to bear arms, except the judges and clergy. Under Henry VIII. it was expressly enjoined on all persons to be regularly instructed, even from their tender years, in the exercise of the *arms* then in use, viz. the long bow and arrows; and to be provided with a certain number of them.

But by the common law of England now it is an offence for persons to go or ride armed with dangerous weapons; but gentlemen, both in and out of the army, may wear common armor, according to their quality.

Arms *of parade*, or *courtesy*, were those used in the ancient justs and tournaments; which were commonly unshod lances, swords without edge or point, wooden swords, and even canes

Bells of **Arms**, *or Bell Tents*, a kind of tents in the shape of a cone, where a company's arms are lodged in the field. They are generally painted with the colour of the facing of the regiment; they have gone much out of use.

Pass of **Arms**, a kind of combat, when anciently one or more cavaliers undertook to defend a pass against all attacks.

Place of **Arms**. See **Fortification.**

Stand of **Arms**, a complete set of arms for one soldier.

Arms, in artillery, are the two ends of an axletree. See *Axletree*, under the word **Carriage.**

ARMY, a large number of soldiers, consisting of artillery, foot, riflemen, horse, dragoons, and hussars or light horse, completely armed, and provided with engineers, a train of artillery, ammunition, provisions, staff, forage, &c: and under the command of a general, having lieutenant-generals, major-generals, brigadier-generals, colonels, lieutenant-colonels, majors, captains, and subalterns, and the suitable staff to each portion. An army is composed of legions, or corps, brigades, regiments, battalions, and squadrons; and is generally divided into three or more co-operating corps, and formed into three lines; the first of which is called the front line, a part of which forms the van-guard; the second, the main body; and the third, the rear-guard, or corps of reserve. The centre of each line is generally possessed by the foot; the cavalry and light troops form the right and left wings of each line; and sometimes a squadron of horse is posted in the intervals between the battalions. When an army is drawn up in order of battle, the horse are frequently placed at five feet from each other, and the foot at three. In each line the battalions are distant from each other about 180 feet, which is nearly equal to the extent of their front; and the same rule holds good of the squadrons, which have about 300 feet distance, being the extent of their own front. These intervals are left for the squadrons and battalions of the second line to range themselves against the intervals of the first, that both may more readily march through those spaces to the enemy. The front line is generally about 300 feet from the centre line; and the centre line as much from the rear, or corps of reserve; that there may be sufficient room to rally when the squadrons or battalions are broken. European armies anciently were a sort of militia; composed chiefly of the vassals and tenants of the lords. When each company had served the number of days or months enjoined by their tenure, or the customs of the fees they held, they returned home.

Armies in general are distinguished by the following appellations—

The grand army.
A covering army.
A blockading army.
An army of observation.
An army of reserve.
A flying army.

The grand army, is that which is the principal of several armies acting at different points remote from each other.

An army is said to *cover* a place when it lies encamped or in cantonments for the protection of the different passes which lead to a principal object of defence.

An army is said to *blockade* a place, when, being well provided with heavy ordnance and other warlike means, it is employed to invest a town for the direct and immediate purpose of reducing it by assault or famine.

An Army *of observation* is so called because by its advanced positions and desultory movements it is constantly employed in watching the enemy.

An Army *of reserve* may not improperly be called a general depot for effective service. In cases of emergency the whole or detached parts of an army of reserve are generally employed to recover a lost day or to secure a victory. It is likewise sometimes made use of for the double purpose of secretly increasing the number of active forces and rendering the aid necessary according to the exigency of the moment, and of deceiving the enemy with respect to its real strength. Such was the army at Dijon, before Bonaparte entered Italy.

Flying Army, a strong body of horse and foot, commanded for the most part by a lieutenant-general, which is always in motion, both to cover its own garrisons, and to keep the enemy in continual alarm.

A naval or sea Army, is a number of ships of war, equipped and manned with sailors, mariners, and marines, under the command of a superior officer, with the requisite inferior officers under him.

ARNAUTS, Turkish light cavalry, whose only weapon was a sabre very much curved. Some are in the Russian service.

ARQUEBUSE *a Croc*, an old piece of fire-arms, resembling a musquet, but which is supported on a rest by a hook of iron, fastened to the barrel. It is longer than a musquet, but of larger calibre, and was formerly used to fire through the loop holes of antique fortifications.

ARQUEBUSIER, a French term, formerly applied to all the soldiery who fought with fire arms, whether cavalry or infantry.

ARRAY, order of battle. See Battle-Array.

ARRAYERS, officers who anciently had the charge of seeing the soldiers duly appointed in their armor.

ARREARS, in the army, were the difference between the full pay and subsistence of each officer, which was directed to be paid once a year by the agent. See Pay.

ARREST, a French phrase, similar in its import to the Latin word *retinaculum*. It consists of a small piece of steel or iron, which was formerly used in the construction of fire-arms, to prevent the piece from going off. *Ce pistolet est en arret* is a familiar phrase among military men in France. This pistol is in arrest, or is stopped.

ARREST, is the exercise of that part of military jurisdiction, by which an officer is noticed for misconduct, or put into a situation to prepare for his trial by a general court-martial.

ARRESTE of the glacis, is the junction of the talus which is formed at all the angles.

ARRIERE, *Fr.* the rear.

Arriere *Ban*, Fr. See Ban.

Arriere-*garde*, Fr. the rear-guard.

En Arriere—*marche!* Fr. to the rear—march!

ARROW, a missive weapon of offence, slender and pointed, made to be shot with a bow.

Arrow. See Fortification.

ARSENAL, is a large and spacious building, or number of buildings, in which are deposited all kinds of arms, and other warlike implements; such as cannon, mortars, howitzers, small arms, and every other kind of warlike engines and instruments of death.

ART. Military art may be divided into two principal branches. The first branch relates to the order and arrangement which must be observed in the management of an army, when it is to fight, to march, or to be encamped. This branch is called *tactics*, and derives its appellation from *tactic*, which signifies *order*.

The same appellation belongs to the other branch of military art, and includes the composition and the application of warlike machines.

ARTICLES OF WAR, are known rules and regulations for the better government of an army. The articles of war of the United States underwent an alteration in 1806, and are of date 10th April of that year; they consist of 103 articles; all that relates to the army not comprehended therein, are published in general orders or in established regulations, issued from time to time from the War Department, or by the commanding officer of the army, copies of which are delivered to the officers of the army. In England they may be altered and enlarged at the pleasure of their king. And in certain cases extend to civilians—as when by proclamation any place shall be put under martial law; or when people follow a camp or army for the sale of merchandize, or serve in any civil capacity. It is ordained, that the articles of war shall be read in the circle of each regiment or company mustered once every month, or oftener if the commanding officer thinks proper. A recruit or soldier is not liable to be tried by a military tribunal, unless it can be proved that the articles of war have been duly read to him.

ARTIFICE, among the French, is understood as comprehending every thing which enters the composition of fire works; as the sulphur, salt-petre, charcoal, &c. See Fire Works.

ARTIFICER *or* Artificier, he who makes fire works, or works in the artillery laboratory, who prepares the fuses, bombs, grenades, &c. It is also applied to the military smiths, collar-makers, &c. and to a particular corps in an army.

ARTILLERY, in a general sense, signifies all sorts of great guns or cannon, mortars, howitzers, petards, and the like; together with all the apparatus and stores thereto belonging, which are not only taken into the field, but likewise to sieges, and made use of both to attack and defend fortified places See Ordnance.

Artillery, in a particular sense, signifies the science of artillery or gunnery, which art includes a knowlege of surveying, levelling, geometry, trigonometry, conic sections, laws of motion, mechanics, fortification, and projectiles.

The Train of Artillery consists of an unlimited number of pieces of ordnance; such as 24 pounders, 18 pounders, 12, 9, 6, 4, and 3 pounders; mortars from 13 to 8 inches diameter; besides royals and cohorns; howitzers of every denomination, mounted on their proper carriages and beds, &c. There is moreover attached to the train a sufficient quantity of horses, spare carriages, spare mortar-beds, block-carriages, limbers, waggons for ammunition and stores, shells, round and grape shot, bullets, powder, cartridges, port-fires, intrenching-tools, artificers tools, miners tools, gins, capstans, forges, small stores, laboratory-stores, pontoons, pontoon-carriages, with their requisites; tumbrels, aprons of lead, budge-barrels, chevaux de frize, pallisades, platforms, chandeliers, blinds, prolonges, drag-ropes, flints, harness, powder-measures, fuze-engines, fuzes, tents, &c. The train of artillery is, or should be, divided into brigades, to which belong not only the officers of the regiments of artillery, but even the civil-list, such as comptrollers, commissaries of stores, clerks of stores, artificers of all denominations, conductors, store-keepers, waggon-masters, drivers, &c. The increase of artillery clearly demonstrates its great utility; for in the year 1500, an army of 50,000 men had only 40 pieces of cannon in the field; and in the year 1517, the same number of troops brought 200 pieces into the field, including mortars and howitzers.

At the battle of Jemappe, which was fought between the French and Austrians on the 6th of November, 1792, the latter had 120 pieces of cannon disposed along the heights of Framery, whilst their effective force in men did not exceed 28,000. The French on this occasion brought nearly the same quantity of ordnance, some indeed of extraordinary calibre, but their strength in men was above 40,000, and composed of young men who had never seen service, nor had any more than a few days discipline.

A Brigade of Artillery generally consists of 8 or 10 pieces of cannon, with all the machinery, and officers to conduct them, and all the necessary apparatus thereto belonging.

The Park of Artillery is that place appointed by the general of an army, to encamp the train of artillery, apparatus, ammunition, as well as the battalions of the artillery, appointed for its service and defence. The figure of the park of artillery, is that of a parallelogram, unless the situation of the ground renders another necessary.

The park of artillery is generally placed in the centre of the second line of encampment, and sometimes in the rear line, or corps of reserve. In both places the muzzles of the guns are in a line with the fronts of the serjeants tents of the regiments of artillery and infantry. Some generals choose to place the park about 300 paces before the centre of the front line of the army. But let the situation be where it will, the manner of forming the park is almost every where the same, except that some artillery officers differ in the disposition of the carriages; others again divide the equipage as well as the guns into brigades, placing the first in the front line, the second in the next, and so on. However the most approved method, is to divide the whole into brigades, placing the guns of the first to the right of the front line, and their ammunition behind them, in one or more lines. The different brigades should be all numbered, as well as every waggon belonging to them. Example, 1st brigade, front line, No 1, 2, &c. 1st brigade, 2d line, No. 1, 2, &c 2d brigade, front line, No. 1, 2, &c. and so of all the rest. This method prevents confusion in the forming and breaking up of the park, as also on a march: besides, according to the numbers, the stores therein contained are known.

Artillery—The proportion of artillery and ammunition necessary to accompany an army in the field, to lay siege to a fortified place, or to defend one, must depend upon so many circumstances, that it is almost impossible, in a work of this kind, to lay down any positive rules as guides on the subject: the following principles are drawn from the best authorities:

1st. **Artillery** *for the Field.*

Field Artillery is divided into *Battalion Guns*, *Artillery of the Park*, and *Horse Artillery.*

The *Battalion Guns* include all the light pieces attached to regiments of the line, which they accompany in all manœuvres, to cover and support them.

The following kinds of field ordnance are attached to battalions of infantry, by different powers in Europe:

French —two—4 Prs. per battalion.
English —two—6 do. - - do.
Danes —two—3 do. - - do.
Austrians—three—6 do. - - do.
Prussians—two— 6 Prs. to a battalion in the first line.
.... —two — 3 Prs. to a battalion in the second line
Hanoverians two—3 Prs. per battalion.

The *Artillery of the Park* is composed of all kinds of field ordnance. It is destined to form batteries of position; that is to say, to occupy advantageous situations, from which the greatest effect may be produced, in supporting the general movements of an army, without following it, like the battalion guns, through all the detail of its manœuvres. The park of artillery attached to an army in the field, generally consists of twice as many pieces of different kinds, varied according to the country in which it is to act, as there are battalions in the army. Gribauvale proposes the following proportion between the different kinds of artillery for the park or reserve, viz. two-fifths of 12 Prs. two fifths of 8 Prs. and one-fifth of 4 Prs. or reserve for battalion guns. In a difficult country he says, it may be ¼ of 12 Prs. ½ of 8 Prs. and ¼ of 4 Prs. and for every 100 pieces of cannon he allots 4 Howitzers; but this proportion of Howitzers is much smaller than what is generally given.

Ammunition *for Field Artillery.*

*A proportion of Ammunition and Stores for each Species of Field Ordnance, viz. 1 Medium 12 Pr.**—*1 heavy 6 Pr.*—*2 light 6 Prs. as they are always attached to Battalions of Infantry--and one 5½ inch Howitzer; according to the British Service.*

Proportion of Ammunition and Stores.	*12 Pounders, Medium.*	*6 Pounders, Heavy.*	*2 Light 6 Pounders.*	*5½ Inch Howitzers.*
Shot fixed to wood bottoms—case	24	30	68	24
.... round	120	120	188	00
Shells - - fixed	00	00	00	24
...... - - empty	00	00	00	120
Carcasses - - fixed	00	00	00	4

* The 12 Prs. which have a ſmall box on their limbers, carry 6 round ſhot and 2 caſe ſhot, with 6 cartridges of 4 lbs. and 2 of 3 1-2 lbs. of powder, more than the above proportion.

Proportion of Ammunition and Stores (Continued.)	*12 Pounders, Medium.*	*6 Pounders, Heavy*	*2 Light 6 Pounders.*	*5½ Inch Howitzers.*
Cartridges of flannel filled with powder. 4 lb.	120	00	00	00
3½ —	00	00	00	00
2¼ —	00	120	00	00
2 —	00	30	00	00
1½ —	00	00	188	00
1¼ —	00	00	68	00
10 oz.	00	00	125	00
1 lb.	00	00	00	144
12 oz.	00	00	00	28
Cartridges flan. empty	12	12	100	12
Ditto of paper for bursting 10 oz.	00	00	00	120
Tubes of tin—N. P.	172	178	560	190
Portfires--long small	18	18	62	18
Fuses--drove - -	00	00	00	132
Powder, mealed lbs.	00	00	00	½
Travelling carriages and limbers - -	1	1	2	1
Aprons of lead -	1	1	2	1
Spunges with staves and heads - -	2	2	4	2
Wad hooks, with staves	1	1	2	00
Handspikes, traversing	2	2	4	2
Tompions with collars	1	1	2	1
Trucks, Hanoverian	00	1	2	1
Straps for lashing side arms - - - -	00	3	8	00
Tarpaulins, gun -	1	1	2	1
..............limber	00	1	2	1
Lintstocks with cocks	1	1	2	1
Drag ropes with pins, pairs - - - -	2	2	4	2
Padlocks with keys	2	3	5	4
Match, slow--lbs.	28	28	56	28
Spikes { Spring	1	1	2	1
Spikes { Common	2	2	4	2
Punches for vents	2	2	4	2
Barrels budge - -	1	1	1	1
Couples for chain traces	00	6	12	6
Spare heads, spunge	1	1	2	1
..............rammer	1	1	2	1
Hammers, claw -	1	1	2	1
Priming irons, sets	1	1	2	1
Draught chains, prs.	2	1	3	2
Powder horns, N. P.	00	1	00	00
Water buckets French	1	1	2	1
Intrench'g tools, felling axes,	1	1	2	1
pick axes, -	1	1	2	1
hand bills, -	1	1	2	1
spades, - -	2	2	4	2
Marline, tarred-skeins	1	1	1	1
Twine, — lbs.	00	1	00	00
Hambro' line— do.	1	1	1	1
Packthread — do.	00	1	00	00
Grease - firkins	1	1	1	1
.... - boxes	3	2	3	3
Tallow - lbs.	1	1	2	1
Lanthorns, dark -	1	1	1	1
Jacks, lifting - -	1	1	1	1
...... handscrew	1	00	00	00
Waggons with hps. and painted covers, Flanders pattern	2	1	1	2

Proportion of Ammunition and Stores (Continued.)		*12 Pounders, Medium.*	*6 Pounders, Heavy.*	*2 Light 6 Pounders.*	*5½ Inch Howitzers.*
Wad miltilts - -		2	1	1	2
Tanned hides - -		2	1	1	2
Men's harness (12 to a set) sets - - -		1	1	00	00
Horse Harness. New pattern.	Rope, 6 do. sets	1	00	00	00
	Chain, 6 do. sets	00	1	00	00
	Trace, 4 do. sets	2	1	1	3
Common pattern	Thill - - -	00	00	2	00
	Trace - -	00	00	4	00
	Bit halters -	00	00	6	00
	Wanties - -	2	1	3	2
	Hemp halters -	14	10	10	12
Whips, long - -		00	00	2	00
.... short - -		7	5	2	6
Nose bags - - -		14	10	10	12
Corn sacks - - -		3	2	3	3
Forage cords, sets		3	2	3	3
Rope, tarred, 2 inch fathoms -		00	00	10	00
For Waggons.	Linch pins	2	1	1	2
	Clouts, body	4	2	2	4
	.... linch	4	2	2	4
	Clout nails, 6*d*.	64	32	32	64
Spare ladle staves		1	1	1	1
Horses, for guns		6	6	6	4
.... for waggons		8	4	4	8
Drivers, for guns		3	3	2	2
.... for waggons		4	2	1	4
Tube boxes, with straps - -		2	2	4	2
Portfire sticks -		2	2	4	2
Cutting knives -		1	1	2	1
Drawing do. -		00	00	00	1
Scissars, pairs -		1	1	2	1
Worsted, ounces		½	½	1	½
Needles, large -		2	2	4	2
Cartouches of leather		2	2	4	2
Copper measures for powder.	4 oz.	1	1	2	00
	2 —	00	1	00	00
	1 —	1	1	2	00
	4 lb. to ¼ oz. sets	00	00	00	1
Thumb stalls -		2	2	4	2
Perpendicular -		00	00	00	1
Quadrant of brass		00	00	00	1
Diagonal scale -		00	00	00	1
Copper salting box		00	00	00	1
Pincers for drawing fuzes, pairs -		00	00	00	1
Sheepskins -		00	00	00	2
Funnels of copper		00	00	00	1
Compasses of steel, Pairs - -		00	00	00	1
Saw, tenant -		00	00	00	1
Files, square -		00	00	00	3
Rasps, half round		00	00	00	2
Flax, oz. - -		00	00	00	8
Tow, oz. - -		00	00	00	4
Saw set - -		00	00	00	1
Mallets of wood		00	00	00	1
Setters do. -		00	00	00	2

This proportion of ammunition and stores is carried in the following manner:

12 Pr. Medium—Has no limber boxes,* but has two waggons attached to it, and the ammunition and stores divided between them.

6 Pr. Heavy—Carries 36 round, and 14 case shot in limber boxes, with a proportion of the small stores; and the remainder is carried in one waggon.

6 Pr. Light—Carries 34 round, and 16 case shot on the limber, with a proportion of the small stores for immediate service; and, if acting separately, must have a waggon attached to it, to carry the remainder. But two 6 pounders attached to a battalion, have only one waggon between them.

5½ Howitzer, Light—Has 22 shells, 4 case shot, and two carcasses in the limber-boxes, with such of the small stores as are required for immediate service; and has two waggons attached to carry the rest.

One common pattern ammunition waggon carries the following numbers of rounds of ammunition of each kind:

Kinds.	No. of Rounds.
12 Pr. Medium, - - - - -	72
6 Pr. Heavy, - - - - - -	120
6 Pr. Light, - - - - - -	156
3 Pr. - - - - - - - -	288
5 1-2 Howitzer, - - - - -	72
8 Inch Howitzers, - - - -	24
Musquets, - - - - - -	20000 †

The waggons, however, attached to the different parks of artillery in England, which have not been altered from the old establishment, are loaded with only the following number, and drawn by three horses:

Kinds.	No. of Rounds.
12 Prs. Medium, - - - - -	66
6 Prs. Heavy, - - - - - -	120
6 Prs. Light, - - - - - -	138
5 1-2 Howitzer, - - - - -	60

The horse artillery having waggons of a particular description, carry their ammunition as follows:

KINDS.	Shot.		Shells.	Carcasses.	Total No. with each Piece.
	Round.	Case.			
12 Prs. light, on the limber.	12	4	4	00	92
Do. —— in one waggon.	52	10	10	00	
6 Prs. light, on the limber.	32	8	00	00	150
Do. —— in one waggon.	97	13	00	00	
5½ In. How'r on the limber.	—	5	13	00	73
Do. —— in one waggon.	—	10	41	4	
3 Prs. heavy, curricle.	6	6	00	00	136
Do.——ammunition cart.	100	24	00	00	

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* A small limber box has lately been added to the medium 12 Prs. which carries 6 round shot and 6 case shot, with a small proportion of the small stores. See note preceding page.

† Though the waggons will contain 20,000 cartridges, it is customary to load them with only 18 half barrels of 1000 each, and 2 half barrels of flints.

The following Proportion of Artillery, Ammunition, and Carriages, necessary for four French Armies of different Degrees of Strength, and acting in very different Countries, is attributed to Gribauvale, and is extracted from Durtubie, on Artillery.

ARMIES.		*Flanders.*	*Moselle.*	*Rhine.*	*Italy.*
Number of battalions		80	28	32	48
Battalion guns . .		160	56	64	94
Park or Reserve.	12 Prs.	32	12	12	16
	8 Prs.	72	24	32	48
	4 Prs.	40	16	16	24
	6In.How.	8	4	4	8
Total pieces of ord.		312	112	128	192
Carriage for ord. including sp. ones	12 Prs.	36	14	14	18
	8 Prs.	81	27	36	54
	4 Prs.	215	78	90	129
	6In.Howtz.	9	5	5	9
Total ord. carriages		341	124	145	210
Ammunition waggons	12 Prs.	96	36	36	48
	8 Prs.	144	48	64	96
	4 Prs.	200	72	80	120
	6 In.How.	24	12	8	24
Wags. for musq. cart.		120	42	48	72
Large wags. for park		10	6	5	8
Total am. waggons		594	216	241	368
Smiths forges.	Large .	14	3	3	8
	Small .	—	3	3	4
Total forges		14	6	6	12
Waggons for Intrench. tools for	Antillery	27	10	12	16
	The army	20	10	12	16
Carriages for	New iron . . .	6	3	3	6
	Wood for spr car.	9	3	3	7
	Anchors, &c. for pontoons .	4	2	2	4
Total store carriages		66	28	32	49
Pontoons upon their carriages . . .		36	18	18	36
Spare pontoon carriages		4	2	2	4
Total pontoon carri'gs		40	20	20	40
RECAPITULATION.					
Ordnance —— pieces		312	112	128	192
Carriages.	Ordnance carri'gs	341	124	145	210
	Ammunition	594	216	241	368
	Store . . .	66	28	32	49
	Pontoon . .	40	20	20	40
	Forges . . .	14	6	6	12
Genl. total of carri'gs		1055	394	444	679

This table contains, beside the proportion of ordnance with each army, also the quantity of ammunition with each piece of ordnance, and the number of rounds of musquet ammunition carried for the infantry; for each waggon in the French service, having its particular allotment of ammunition and stores, it needs but to know the number of waggons of each description, to ascertain the quantity of ammunition and stores with an army. The following is the number of waggons usually attached to each piece of field ordnance in the French service, and the quantity of ammunition carried with each.

Kind of Ordnance and Number of Waggons attached to each.	Shot. Round.	Shot. Case.	Total with each piece.
12 Pr. on the carriage	9	00	00 219
3 Waggons, each containing	48	20	
8 Pr. on the carriage	9	00	00 193
· Waggons, each containing	62	30	
4 Pr. on the carriage	18	00	00 168
One waggon, containing	100	50	
6 Inch Howitzer, on the carriage	00	4	00 160
3 Waggons, each containing	shell 49	3	

The French horse artillery waggon, called the *wurst*, carries 57 rounds for 8 pounders; or 30 for 6 inch howitzers.

The following is a proportion of ammunition for one piece of field artillery of each kind, by different powers in Europe.

KINDS.	Austrians. Case.	Austrians. Round.	Prussians. Case.	Prussians. Round.	Danes. Case.	Danes. Round.	Hanoverians. Case.	Hanoverians. Round.
3 Pr.	40	184	20	90	58	177	50	150
6 —	36	176	30	150	53	166	48	144
12 —	44	94	20	130	44	128	50	150
Howitzer	16	90	20	80	25	76	30	120

Of the movements and positions of field artillery.

Battalion Guns; the following are the usual positions taken by battalion guns, in the most essential manœuvres of the battalion to which they are attached; but the established regulations for the movements of the infantry in the British service, take so little notice of the relative situations for the artillery attached to it, that they afford no authority for a guide on the subject. In review, both guns are to be placed, when in line, on the right of the regiment; unlimbered and prepared for action. The guns 10 yards apart, and the left gun 10 yards from the right of the battalion. Nos. 7 and 8 dress in line with the front rank of the regiment. The officer, at open order, will be in front of the interval between his guns, and in line with the officers of the regiment. When the regiment breaks into column, the guns will be limbered up and wheeled by pairs to the left: the men form the line of march, and the officer marches round in front of the guns. In the review of a single battalion, it is usual after marching round the second time, for one of the guns to go to the rear, and fall in at the rear of the column. Upon the regiment wheeling on the left into line, the guns, if separated, will be unlimbered to the right, but if they are both upon the right, they must be wheeled to the right, and then unlimbered; and afterwards run up by hand, as thereby they do not interfere with the just formation of the line, by obstructing the view of the pivots.

The usual method by which the guns take part in the firings while in line, is by two discharges from each piece, previous to the firing of the regiment; but this is usually regulated by the commanding officer, before the review. Though the guns when in line with a regiment in review, always remain in the intervals; in other situations of more consequence, every favorable spot which presents itself, from which the enemy can be more effectually annoyed, should be taken advantage of. In column, if advancing, the guns must be in front; if retreating, in the rear of the column If in open column of more than one battalion, the guns in the centre must be between the divisions, and when the column is closed, these guns must move to the outward flank of that division of the column, which leads the regiment to which they are attached. In changing front, or in forming the line from column, should the guns be on that flank of the battalion on which the new line is to be formed, they will commence firing to cover the formation

In retiring by alternate wings or divisions, the guns must be always with that body nearest the enemy. That is, they will not retire with the first half, but will remain in their position till the second half retires; and will then only retire to the flanks of the first half; and when it retires again, the guns will retire likewise, but only as far as the second half, and so on.

When in hollow square, the guns will be placed at the weakest angles, and the limbers in the centre of the square. In passing a bridge or defile in front, the guns will be the first to pass; unless from any particular position they can more effectually *enfilade* the *defilé*; and thereby better open the passage for the infantry. But in retiring through a *defilé*, the guns will remain to the last, to cover the retreat.

General rule—with very few variations, the guns should attend in all the movements of the battalion, that division of it, to which they are particularly attached; and every attention should be paid in thus adapting the movements of the guns to those of the regiment, that they be not entangled with the divisions of the line, and never so placed as to obstruct the view of the pivots, and thereby the just formation of the line; but should always seek those positions, from which the enemy can be most annoyed, and the troops to which they are attached, protected.

If at any time the battalion guns of several regiments should be united and formed into brigades, their movements will then be the same as those for the artillery of the park.

ARTILLERY *of the Park*--The artillery of the park is generally divided into brigades of 4, 6 or 8 pieces, and a reserve, according to the force and extent of the front of an army. The reserve must be composed of about one-sixth of the park, and must be placed behind the first line. If the front of the army be extensive, the reserve must be divided.

The following are the principal rules for the movements and positions of the brigades of artillery: they are mostly translated from the *Aide Momoire*, a new French military work.

In a *defensive* position, the guns of the largest caliber must be posted in those points, from whence the enemy can be discovered at the greatest distance, and from which may be seen the whole extent of his front.

In an *offensive* position, the weakest points of the line must be strengthened by the largest calibers; and the most distant from the enemy; those heights on which the army in advancing may rest its flanks, must be secured by them, and from which the enemy may be fired upon obliquely.

The guns should be placed as much as possible under cover; this is easily done upon heights, by keeping them so far back that the muzzles are only to be seen over them: by proper attention many situations may be found of which advantage may be taken for this purpose, such as banks, ditches, &c. every where to be met with.

A *battery* in the field should never be discovered by the enemy till the very moment it is to open. The guns may be masked by being a little retired; or by being covered by troops, particularly cavalry.

To enable the commanding officer of artillery to choose the proper positions for his field batteries, he should of course be made acquainted, with the effect intended to be produced; with the troops that are to be supported; and with the points that are to be attacked; that he may place his artillery so as to support, but not incommode the infantry; nor take up such situations with his guns, as would be more advantageously occupied by the line. That he may not place his batteries too soon, nor too much exposed; that he may cover his front and his flanks, by taking advantage of the ground; and that he may not venture too far out of the protection of the troops, unless some very decided effect is to be obtained thereby.

The guns must be so placed as to produce a cross fire upon the position of the enemy, and upon all the ground which he must pass over in an attack.

They must be separated into many small batteries, to divide the fire of the enemy; while the fire from all these batteries, may at any time be united to produce a decided effect against any particular points.

These points are the *débouchés* of the enemy, the heads of their columns, and the weakest points in the front. In an attack of the enemy's position, the cross fire of the guns must become *direct*, before it can impede the advance of the troops; and must annoy the enemy's positions nearest to the point attacked, when it is no longer safe to continue the fire upon that point itself.

The shot from artillery should always take an enemy in the direction of its greatest dimension; it should therefore take a line obliquely or in flank; but a column in front.

The artillery should never be placed in such a situation, that it can be taken by an enemy's battery obliquely, or in flank, or in the rear; unless a position under these circumstances, offers every prospect of producing a most decided effect, before the guns can be destroyed or placed *hors de combat*.

The most elevated positions are not the best for artillery, the greatest effects may be produced from a height of 30 or 40 yards at the distance of about 600, and about 16 yards of height to 200 of distance.

Positions in the rear of the line are bad for artillery, because they alarm the troops, and offer a double object to the fire of the enemy.

Positions which are not likely to be shifted; but from whence an effect may be produced during the whole of an action, are to be preferred; and in such positions a low breast work of 2 or 3 feet high may be thrown up, to cover the carriages.

Artillery should never fire against artillery, unless the enemy's troops are covered, and his artillery exposed; or unless your troops suffer more from the fire of his guns, than his troops do from yours.

Never abandon your guns till the last extremity. The last discharges are the most destructive; they may perhaps be your salvation, and crown you with victory.

The parks of artillery in Great Britain are composed of the following ordnance: 4 medium 12 pounders; 4 desaguliers 6 pounders; and 4 light 5½ inch howitzers.

The following is the proposed line of march for the three brigades when acting with different columns of troops, as settled, in 1798.

12 Pounders.	6 Pounders.	Howitzers.
4 Guns.	4 Guns.	4 Howitzers.
8 Ammunition Waggons.	4 Ammunition Waggons.	8 Ammunition Waggons.
1 Forge Cart.	1 Forge Cart.	1 Forge Cart.
1 Store Waggon, with a small proportion of stores and spare articles.	1 Store Waggon.	1 Store Waggon.
1 Spare Waggon.	1 Spare Waggon.	1 Spare Waggon.
1 Waggon to carry bread and oats.	1 Waggon for bread and oats.	1 Waggon with bread and oats.
2 Waggons with musquet ball cartridges.	2 Waggons with musquet ball cartridges.	2 Waggons with musquet ball cartridges.
18 Total.	14 Total.	18 Total.

2d. Artillery and Ammunition for a siege.

Necessary considerations in forming an estimate for this service.

The force, situation, and condition of the place to be besieged; whether it be susceptible of more than one attack; whether lines of circumvallation or countervallation will be necessary; whether it be situated upon a height, upon a rocky soil, upon good ground, or in a marsh; whether divided by a river, or in the neighborhood of one; whether the river will admit of forming inundations; its size and depth; whether the place be near a wood, and whether that wood can supply stuff for fascines, gabions, &c. whether it be situated near any other place where a depot can be formed to supply stores for the siege. Each of these circumstances will make a very considerable difference in proportioning the stores, &c. for a siege. More artillery will be required for a place susceptible of two attacks, than for the place which only admits of one. For this last there must be fewer pieces of ordnance, but more ammunition for each piece. In case of lines being necessary, a great quantity of intrenching tools will be required, and a numerous field train of artillery. In case of being master of any garrison in the neighborhood of the besieged town, from whence supplies can readily be drawn, this must be regarded as a second park: and too great a quantity of stores need not be brought at once before the besieged place. The number of batteries to be opened before the place must determine the number of pieces of ordnance; and on the quantity of ordnance must depend the proportion of every species of stores for the service of the artillery.

There must be a battery to *enfilade* every face of the work to be besieged, that can in any way annoy the besiegers in their approaches. These batteries, at least that part of them to be allotted for guns, need not be much longer than the breadth of the rampart to be enfiladed, and will not therefore hold more than 5 or 6 heavy guns; which, with two more to enfilade the opposite branch of the covert way, will give the number of guns for each ricochet battery. As the breaching batteries, from their situation, effectually mask the fire of the first or ricochet batteries, the same artillery generally serves for both. Having thus ascertained the number of heavy guns, the rest of the ordnance will bear the following proportion to them:

Mortars. From 8 inch to 13 inch, about ¼.

Small Mortars. About ½.

Heavy Howitzers. About ⅛.

The fewer kinds of ordnance which compose the demand the better, as a great deal of the confusion may be prevented, which arises from various kinds of ammunition and stores being brought together.

The carriages for the ordnance are generally as follows:

For 24 Prs. 5-6 the number of guns.

For Mortars, 8-9 the number of mortars.

For Howitzers, ¾ the number of howitzers.

For *Stone* Mortars, 6-7 the number of mortars.

Ammunition for the ordnance.

24 Prs. At 1000 rounds per gun.

Mortars, howitzers, and stone mortars, at 800 rounds per piece of ordnance.

The following proportion of artillery and ammunition was demanded by a very able officer, for the intended siege of Lisle, in 1794, which place was thought susceptible of two attacks.

64—24 Prs. with carriages complete, at 50 *round shot* per gun, per day, for the whole siege; half of them *en ricochet*, with 2lbs. of powder; the other half with the full charge of 8lbs.

Case and *Grape* shot, at one round per gun, per day, of each: 6lbs. per charge.

Shells for guns, two rounds do.

Flannel cartridges, for the case, grape, and shells.

Tin tubes for the case and grape.

Quill tubes for the round shot.

Spare, one tenth.

28—10 Inch mortars, on iron beds, at 50 shells each per day, for the whole siege. 3lbs. of powder charge; 2lbs. 10 oz. for bursting.

Pound shot; 100 to a charge; 50 rounds per mortar each day for 10 mortars 7 days; 2lbs. of powder each.

Hand granades; 25 to a charge; the same as the pound shot.

Carcasses, *round*; 1 per mortar, per day.

8—8 Inch howitzers, on travelling carriages.

30 *Shells* for each per day, during the siege.

Case shot; 5 rounds per day each.

Carcasses; 1 per day each.

Powder; 1lb. per charge; 2lb. 14oz. for bursting.

20—5½ Inch mortars, on wooden beds.

50 *Shells* for each, per day, for the whole siege; charge 8 oz; 12 oz. for bursting.

Flannel cartridges, for ¼ the number of rounds.

Tin tubes in the same proportion.

Portfires, one half the number of rounds with tubes.

Fuzes, one tenth to spare.

Match, 50 cwt.

Spare carriages for 24 Prs. seven.

2 Devil carriages.

6 Sling carts.

6 Block carriages.

3 Forge carts.

3 Store waggons, with iron and coals.

3 Triangle gins, complete.

6 Laboratory tents.

2 Small petards.

4 Grates for heating shot.

Of the arrangement of Artillery at a siege.

The first arrangement of the artillery at a siege is to the different batteries raised near the first parallel, to enfilade the faces of the work on the front attacked, which fire on the approaches. If these first batteries be favorably situated, the artillery may be continued in them nearly the whole of the siege; and will save the erection of any other gun batteries, till the besiegers arrive on the crest of the glacis. It however frequently happens, from local circumstances, that the besiegers cannot avail themselves of the most advantageous situations for the first batteries. There are four situations from which the defences of any face may be destroyed; but not from all with equal facility. The best position for the first batteries, is perpendicular to the prolongation of the face of the work to be enfiladed. If this position cannot be attained, the next that presents itself is, on that side of the prolongation which takes the face in reverse; and under as small an angle as possible. From both these positions the guns must fire *en ricochet*. But if the ground, or other circumstance, will not admit of either of these being occupied by ricochet batteries, the battery to destroy the fire of a face must be without the prolongation, so as to fire obliquely upon the outside of the face. The last position, in point of advantage, is directly parallel to the face. From these two last positions the guns must fire with the full charges.

The second, or breaching batteries at a siege, are generally placed on the crest of the glacis, within 15 or 18 feet of the covert way; which space serves as the epaulment: but if the foot of the revetement cannot be seen from this situation, they must be placed in the covert way, within 15 feet of the counterscarp of the ditch. These batteries must be sunk as low as the soles of the embrasures, and are in fact but an enlargement of the sap, run for the lodgment on the glacis or in the covert way. In constructing a battery on the crest of the glacis, attention must be paid that none of the embrasures open upon the traverses of the covert way. These batteries should consist of at least four guns; and if the breadth between the traverses will not admit of this number, at the usual distances, the guns must be closed to 15 or 12 feet from each other.

The mortars are generally at first arranged in battery, adjoining the first gun batteries, or upon the prolongation of the capitals of the works; in which place they are certainly least exposed. Upon the establishment of the half parallels, batteries of howitzers may be formed in their extremities, to enfilade the branches of the covert way; and upon the formation of the third parallel, batteries of howitzers and stone mortars may be formed to enfilade the flanks of the bastions, and annoy the besieged in the covert way. In the lodgement on the glacis, stone and other mortars may also be placed, to drive the besieged from their defences. A great object in the establishment of all these batteries, is to make such an arrangement of them, that they mask the fire of each other as little as possible; and particularly of the first, or ricochet batteries. This may very well be prevented till the establishment on the crest of the glacis, when it becomes in some degree unavoidable: however, even the operations on the glacis may be so arranged, that the ricochet batteries be not masked till the breaching batteries be in a great state of forwardness: a very secure method, and which prevents the soldiers in trenches being alarmed by the shot passing over their heads, is to raise a *parados*, or parapet, in the rear of the trenches, at such parts where the fire from the besieger's batteries crosses them. For further details on this subject, and for the manner of constructing batteries, see the word *Battery*; also the words *Ricochet*, *Breach*, *Magazine*, *Platform*, &c.

3d. **Artillery** *and Ammunition for the defence of a Fortified Place.*

It is usual in an Estimate of Artillery and Ammunition for the Defence of Fortified Places, to divide them into Eight Classes, as follows:

CLASSES.	1	2	3	4	5	6	7	8
Garrisons	12000	10000	8000	5000	3500	2500	1600	400
Cannon	100	90	80	70	60	50	40	30
Triangle Gins . . .	4	3	2	2	2	1	1	1
Sling Carts	4	3	2	2	2	1	1	1
Jacks of Sizes . . .	4	3	2	2	2	1	1	1
Truck carriages . . .	6	6	4	4	2	2	2	2
Ammunition carts, &c.	12	12	12	6	6	6	2	2
Tools for Pioneers .	9000	6000	5000	4000	3500	3000	1000	1000
………… Miners . .	300	200	100	100	100	100	30	5
Tools for Cutting { ⅓ Axes ⅔ Billh'ks }	1200	900	600	500	450	300	150	150
Forges complete . .	6	4	2	2	2	2	1	1

The guns will be of the following calibres: one-third f 18 prs.; one-third of 12 prs.; and one-third of 24, 9, and 4 pounders in equal proportions. If the place does not possess any very extraordinary means of defence, it will be very respectably supplied with 800 rounds of ammunition per gun for the two larger calibers, and 900 for each of the others.

Gun Carriages; one-third more than the number of guns.

Mortars; about one-fourth the number of guns in the three first classes; and one-fifth or one-sixth in the other classes. Of these two-fifths will be 13 or 10 inch mortars, and the rest of a smaller nature.

Howitzers; one-fourth the number of mortars.

Stone Mortars; one-tenth the number of guns.

Shells; 400 for each of the 10 and 13 inch mortars, and 600 for each of the smaller ones.

Beds for mortars; one-third to spare.

Carriages for howitzers; one-third to spare.

Hand Grenades; 4 or 5000 for the two first classes; 2000 in the three following classes; and from 1500 to 600 in the three last classes.

Rampart Grenades; 2000 for the first class; 1000 for the four following classes; and 500 for the sixth class; none for the two last.

Fuzes; one-fourth more than the number of shells.

Bottoms of wood for stone mortars; 400 per mortar.

Sand Bags; 500 for every piece of ordnance in the large places, and one-fourth less in the small ones.

Handspikes; 10 per piece.

Tackle Falls for gins; 1 for every 10 pieces to spare.

Musquets; 1 per soldier, and the same number to spare.

Pistols, pairs; one half the number of musquets.

Flints; 50 per musquet, and 10 per pistol.

Lead or *Balls* for small arms; 30 pounds per musquet.

Powder for small arms; 5 pounds for every musquet in the garrison, including the spare ones.

The above proportions are taken from Durtubie's Manuel De l'Artilleur.

The following method of regulating the management of the artillery, and estimating the probable expenditure of ammunition in the defence of a fortified place, is extracted from a valuable work on fortification lately published at Berlin. It is particularly applied to a regular hexagon: the siege is divided into three periods, viz.

1st. From the first investiture to the first opening of the trenches, about 5 days.

2d. From the opening of the trenches to the effecting a lodgement on the glacis, about 18 days.

3d. From this time to the capitulation, about 5 days.

First Period. Three guns on the barbette of each bastion and on the barbettes of the ravelins in front of the gate ways, half 24 prs. and half 18 prs.[*] three 9 prs. on the barbette of each of the other ravelins.

Twelve 12 prs. and twelve 4 prs. in reserve.

One 13 inch mortar in each bastion.

Six of 8 inch in the salient angles of the covert way.

Do. in reserve.

Ten stone mortars.

The 12 prs. in reserve, are to be ranged behind the curtain, on which ever side they may be required, and the 4 prs. in the outworks; all to fire *en ricochet* over the parapet. By this arrangement, the whole of the barbette guns are ready to act in any direction, till the side of attack is determined on; and with the addition of the reserve, 49 pieces may be opened upon the enemy the very first night they begin to work upon the trenches.

The day succeeding the night on which the trenches are opened, and the side to be attacked determined, a new arrangement of the artillery must take place. All the 24 and 18 prs. must be removed to the front attacked, and the other bastions, if required, supplied with 12 prs The barbettes of the bastions on this front may have each 5 guns, and the twelve 18 prs. may be ranged behind the curtain. The six mortars in reserve must be placed, two in each of the salient angles of the covert way of this front, and with those already there mounted as howitzers,[*] to fire down the prolongations of the capitals. Three 4 pounders in each of the salient places of arms of the ravelins on the attacked fronts, to fire over the palisading, and five 9 prs. in the ravelin of this front. This arrangement will bring 47 guns and 18 mortars to fire on the approaches after the first night; and with a few variations will be the disposition of the artillery for the second period of the siege. As soon as the enemy's batteries are fairly established, it will be no longer safe to continue the guns *en barbette*, but embrasures[†] must be opened for them; which embrasures must be occasionally masked, and the guns assume new directions, as the enemy's fire grows destructive; but may again be taken advantage of, as circumstances offer. As the enemy gets near the third parallel, the artillery must be withdrawn from the covert way to the ravelins, or to the ditch, if dry, or other favorable situations; and, by degrees, as the enemy advances, to the body of the place. During this period of the siege, the embrasures must be prepared in the flanks, in the curtain which joins them, and in the faces of the bastions which flank the ditch of the front ravelins. These embrasures must be all ready to open, and the heavy artillery mounted in them, the moment the enemy attempts a lodgement on the glacis.

Every effort should be made to take advantage of this favorable moment, when the enemy, by their own works, must mask their former batteries, and before they are able to open their new ones.

The expenditure of ammunition will be nearly as follows:

First period of the siege; 5 rounds per gun, per day, with only half the full charge, or one-sixth the weight of the shot, and for only such guns as can act.

Second period; 20 rounds per gun, per

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[*] For 16 prs. in the French work, we have said 18 prs....for 8 prs. 9 prs....for 12 inch mortars, 13 inch: to which they nearly answer, our measures being generally the same as the English.

[*] The iron mortars, on iron beds, all admit of being fired at low angles.

[†] A German author proposes that the mounds of earth which enable the guns to fire en barbette, should be so arranged, that the embrasures may be opened between them; and when the guns descend to the embrasures, the barbettes will serve as traversers.

day, with one-sixth the weight of the shot.

Third period; 60 rounds per gun, per day, with the full charge, or one-third the weight of the shot.

Mortars; at 20 shells per day, from the first opening of the trenches to the capitulation.

Stone Mortars; 80 rounds per mortar, for every 24 hours, from the establishment of the demi-parallels to the capitulation; about 13 days.

Light, and *Fire balls;* five every night, for each mortar, from the opening of the trenches to the eighth day, and three from that time to the end of the siege.

These amount to about 700 for guns.
400 for mortars.
1000 for stone do.

This proportion and arrangement is however made upon a supposition, that the place has no countermines to retard the progress of the besiegers, to a period beyond what is abovementioned; but the same author estimates, that a similar place, with the covert way properly countermined beforehand, and those countermines properly disputed, may retard a siege at least 2 months; and that if the other works be likewise effectually countermined and defended, the siege may be still prolonged another month.

The above proportion is therefore to be further regulated, as the strength of the place is increased by these or any other means. These considerations should likewise be attended to, in the formation of an estimate of ammunition and stores for the siege of a fortified place. See *Carriage*, *Platform*, *Park*, and the different kinds of artillery, as *Gun*, *Mortar*, *Howitzer*, &c.

The ammunition for small arms is estimated by this author as follows:

¼ of a pound of gunpowder, or 10 rounds per day, per man, for all the ordinary guards.

1½ lbs. or 50 rounds per man, per 12 hours, for all extraordinary guards.

⅝ of a pound, or 25 rounds for every man on picket, during the period of his duty.

ARTILLERY, in a military acceptation of the term, signifies every species of light or heavy ordnance. It is classed under specific heads; the most important of which are—

Field **ARTILLERY**, which includes every requisite to forward the operations of an army, or of any part of an army acting offensively or defensively in the field. Field artillery may be divided into two distinct classes—*Field Artillery*, commonly called the *Park*, and *Horse Artillery*.

Encampment of a regiment of **ARTILLERY.** Regiments of artillery are always encamped, half on the right, and half on the left of the park. The company of bombardiers (when they are formed into companies, which they are in European nations excepting England) always takes the right of the whole, and they rate by seniority, so that the two youngest are next but one to the centre or park: the two companies next to the park, are the miners on the right, and the artificers on the left.

In the rear of, and 36 feet from the park, are encamped the civil list, commissioners, clerks, &c. all in one line.

The breadth between the front tent-pole of one company, and that of another, called the streets, will depend on the size and capacity of the tents; but according to the old mode during the revolution of 1776, when the American army had tents, 36 feet to each was the interval.

	FEET.
From the front pole of officers tent of the quarter-guard, or guard of the army, to the centre of the bells of arms of ditto	34
To the parade of the quarter-guard	12
To the first line of the regimental parade	150
To the centre of the bells of arms	90
From thence to the front poles of serjeants tents	12
For pitching 12 tents of artillery, with their proper intervals at 9 feet each	108
From the rear of companies tents, to the front of the subalterns tents	60
From the front of the subalterns, to that of the captains	72
From the front of the captains, to that of the field officers	72
From the front of the field officers, to that of the colonels	36
From the front of the colonels, to that of the staff officers	48
From the front of the staff officers, to the front row of bâtmans tents	54
From thence to the first row of pickets for horses	6
From thence to the second row	36
From thence to the second row of bâtmans tents	6
From thence to the front or the grand suttler's tent	42
From thence to the centre of the kitchens	60
From thence to the front of petit-suttler's tents	45
From thence to the centre of the bells of arms of the rear-guard	45
Total depth	789

The army guard is in the front of the park, opposite the alarm-guns, in a line with the artillery quarter-guards, that are placed on the right and left of the artillery companies.

When there are bells of arms they front the poles of serjeants tents.

The colours are placed in the centre of the front line of guns, in the interval of the two alarm-guns, in a line with the bells of arms of the companies.

The lieutenant-colonels and majors tents front the centres of the second streets from the right and left of the regiment.

The colonel's tent is in a line with the colours and guard of the army, facing the same.

The staff-officers front the centres of the second streets, on the right and left of the angles of the park.

The bâtmen's tents front towards their horses.

The rear-guard fronts outwards. The front poles are in a line with the centre of the bells of arms, and each is 18 feet distant. The parade of the rear-guard is 12 feet from the bells of arms.

In the rear of the rear guard, and 80 feet distant from their parade, the artillery-horses and drivers tents are placed, in two or more lines, parallel with the line of guns, extending from the right and left of the whole.

It sometimes happens, that a very large train of artillery is in the field, with two or more regiments: in that case the oldest takes the right of the park, the next oldest the left, and the youngest the centre: the centre or grand street is 63 feet broad, opposite to which the tent of the commanding officer is placed. In the centre of this street, the colours are placed in a line with the bells of arms, and the artillery quarter-guard is in the front of the colours at the same distance as before mentioned. For further particulars of camps, see *American Mil. Lib.* Vol. II. Art. CAMPS.

Regiment of ARTILLERY. The corps of artillery, with all its dependencies, is, as it were, the general instrument of the army. It is impossible to attack fortified places, or to defend them, without artillery; and an army in the field, which wants artillery, can not so well make head against one that is well provided with it. For this reason it is, that at all times governments have taken great care to provide proper officers of learning and capacity to govern, repair and keep in order, this essential part of military force.

The strength of a regiment of artillery depends upon the circumstances of the country, the quantity of troops to maintain, the number of fortifications and points to be defended. It had always been the custom, to regulate the corps of artillery according to the French method; but, the celebrated king of Prussia fixed his regiments of artillery on another plan, and produced a great change, upon which the French have since improved, and are again followed by all nations. The British method, from which we borrowed in the revolution, may be useful to know as well as the Prussian.

In 1628, and probably long before, the artillery had sundry privileges, from which the rest of the army were excluded, viz. of having the first rank and the best quarters; neither could any carriage or waggon presume to march before theirs, except that belonging to the treasurer.

In 1705, we find the first mention made of English *royal* artillery, before that time it was only called the *train of artillery*. It then consisted only of 4 companies, under the command of general Borgard. From that period it gradually increased to 6 battalions, each battalion consisting of 10 companies, beside 1 invalid battalion equal in its establishment to the others, but confined in duty to the home garrisons, or to Jersey, Guernsey and Bermuda, commanded by a colonel commandant, 1 colonel en second, 2 lieutenant-colonels, 1 major, who have no companies. Each company in time of war generally consisted of 120 men, commanded by 1 captain, 1 captain lieutenant, 2 first, and 1 second lieutenant. In time of peace the companies were reduced to 50 men each.

Frederick the second of Prussia, found his army in a very good condition, excepting the corps of artillery and engineers, little esteemed by the rest of the army, and the officers without commissions. Knowing how necessary it was to have a good corps of artillery and engineers, and how impossible it was to secure that important object without having officers learned in every branch of military mathematics; immediately draughted all the illiterate officers into the garrison regiments, supplying their places with persons of capacity; and giving them all commissions, with rank equal to that of the officers of the guards, and an extraordinary pay. This method of proceeding established the use and reputation of that corps; induced the nobility and men of rank (provided they had capacity) to engage in it sooner than elsewhere; which brought it to that summit of high renown, it since enjoyed.

The Prussian army consisted of 12 battalions, 8 for the field, and 4 for garrison. Each battalion had 12 companies, namely, 1 company of bombardiers, 1 of miners, 1 of artificers, and 9 of artillerists. The first, or bombardier companies, were composed of 1 captain, 2 lieutenants, 3 upper and 6 under fire-workers, 2 serjeants, 4 corporals, 2 drummers, and 60 bombardiers. The miners had the same commissioned officers, with 3 serjeants, 6 corporals, 2 drummers, 33 miners, and 33 sappers. The artificers had the same officers and non-commissioned officers as the miners, with 30 artificers, and 36 pontoneers. All the artillery companies had 3 commissioned and 6 non-commissioned officers, 2 drummers, and 60 artillerists. The colonel, lieutenant-colonel, and major's companies, had each a captain-lieutenant; and each battalion had further, 1 chaplain, 1 auditor, 1 adjutant, 1 quarter-master, 1 doctor, 3 surgeons, 1 serjeant-major, 1 drum-major, 6 musicians, and 1 provost.

By the law of the 16th March, 1802, sect. 2, the United States artillery consists of five battalions, consisting of 1 colonel, 1 lieutenant colonel, 4 majors, 1 adjutant, 20 companies, each composed of 1 captain, 1 first lieutenant, 1 second lieutenant, 2 cadets, 4 serjeants, 4 corporals, 4 musicians, 8 artificers, and 56 privates; two teachers of music were added by the law of February 28, 1803.

March of the ARTILLERY The marches of the artillery are, of all the operations of war, the most delicate; because they must not only be directed on the object you have in view, but according to the movements the enemy make. Armies generally march in 3 columns, the centre column of which is the artillery: should the army march in more columns, the artillery and heavy baggage march nevertheless in one or more of the centre columns; the situation of the enemy determines this. If they are far from the enemy, the baggage and ammunition go before or behind, or are sent by a particular road; an army in such a case cannot march in too many columns. But should the march be towards the enemy, the baggage must absolutely be all in the rear, and the whole artillery form the centre column, except some brigades, one of which marches at the head of each column, with guns loaded and burning matches, preceded by a detachment for their safety. The French almost invariably place their baggage in the centre.

Suppose the enemy's army in a condition to march towards the heads of your columns: the best disposition for the march is in 3 columns only; that of the centre for the artillery; for it is then easy to form it in order of battle. Hence it is equally commodious for each brigade of artillery to plant itself at the head of the troops, in the place marked for it, in such a manner, that the whole disposition being understood, and well executed, the line of battle may be quickly formed in an open country, and in the presence of any enemy, without risquing a surprise; by which method the artillery will always be in a condition to act as soon as the troops, provided it march in brigades.

If your march should be through a country full of defiles, some cavalry and other light troops must march at the head of the columns, followed by a detachment of grenadiers and a brigade of artillery; cannon being absolutely necessary to obstruct the enemy's forming into order of battle.

When you decamp in the face of the enemy, you must give most attention to your rear-guard. On such occasions, all the baggage, ammunition, provisions, and artillery, march before the troops; your best light troops, best cavalry, some good brigades of infantry, together with some brigades of artillery, form the rear-guard. Cannon is of infinite use for a rear-guard, when you are obliged to pass a defile, or a river; and should be placed at the entry of such defile, on an eminence, if there be one, or on any other place, from whence they can discover the ground through which the enemy must march to attack the rear-guard.

A detachment of pioneers, with tools, must always march at the head of the artillery, and of each column of equipage or baggage.

If the enemy be encamped on the right flanks of the march, the artillery, &c. should march to the left of the troops, and *vice versa*. Should the enemy appear in motion, the troops front that way, by wheeling to the right or left by divisions; and the artillery, which marches in a line with the columns, passes through their intervals, and forms at the head of the front line, which is formed of the column that flanked nearest the enemy, taking care at the same time that the baggage be well covered during the action.

Though we have said armies generally march in 3 columns, yet where the country will allow it, it is better to march in a greater number; and let that number be what it will, the artillery must form the centre columns. See *American Mil. Lib.* on the march of troops.

Line of march of the ARTILLERY for a large army, as established before the French revolution:

1. A guard of the army; the strength of which depends on the commander in chief.
2. The companies of miners (excepting a detachment from each, dispersed in various places, to mend the roads) with tumbrels of tools, drawn by 2 horses, assisted by pioneers.
3. The brigades of artillery's front-guard, with four light 6 pounders loaded, and matches burning.
4. The trumpeters on horse-back.
5. The flag-gun, drawn by 12 horses, and ten 12 pounders more, by 4 horses each.
6 Twenty waggons with stores for the said guns, and 1 spare one, by 4 horses each.
7. All the pontoons, with the waggons thereto belonging.
8. Eight 9 pounders, by 3 horses each.
9. Fifteen waggons with stores for said guns, by 4 horses each, and 2 spare ones.
10. Gins and capstans, with their proper workmen, 3 waggons, with 2 horses each
11. A forge on four wheels, and 1 waggon, 4 horses each.
12. Twelve heavy 24 pounders, by 16 horses each.
13. Sixteen waggons with stores for ditto, and 2 spare ones, by 4 horses each.
14 A waggon with tools, and pioneers to mend the roads.
15. Nine light 24 pounders, by 8 horses each.
16. Twelve waggons with stores for ditto, and 2 spare ones, by 4 horses each.
17 A forge and waggon, by 4 horses each.
18. Nine 24 pounders, by 8 horses each.
19. Twelve waggons with stores for ditto, and 2 spare ones.
20. Twelve 12 pounders, by 8 horses each.

21. Sixteen waggons with stores for ditto, and 2 spare ones.

22. Sixteen 5.8 inch mortars, by 2 horses each.

23. Twenty-five waggons with stores for ditto, and 2 spare ones.

24. Ten 8 inch mortars, by 4 horses each.

25. Twenty waggons with stores for ditto, and 2 spare ones.

26. Six 10 inch howitzers, by 6 horses each.

27. Twenty waggons with stores for ditto, and 2 spare ones.

28. A waggon with tools, and men to mend the roads.

29. A forge and waggon, by 4 horses each.

30. Ten 8 inch mortars, by 4 horses each.

31. Twenty waggons with stores for ditto, and a spare one.

32. Sixteen 12 inch mortars, by 8 horses each.

33. Thirty waggons with stores for ditto, and 2 spare ones.

34. Eight 18 inch stone mortars, by 10 horses each.

35. Sixteen waggons with stores for ditto, and a spare one.

36. Eight 9 pounders, by 3 horses each.

37. Sixteen waggons with stores for ditto, and a spare one.

38. Twenty 6 pounders, by 2 horses each.

39 Twenty waggons with stores for ditto, and a spare one.

40. Two sling-waggons, and 2 truck-carriages, 4 horses each.

41 Twenty 3 pounders, by 1 horse each.

42. Ten waggons with stores for ditto, and a spare one.

43. A waggon with tools, &c.

44. A forge and waggon, by 4 horses each.

45. Twelve 2 and 1 pounders, by 1 horse each.

46. Six waggons with stores for ditto.

47. Sixteen 6 pounders, by 2 horses each.

48. Ten waggons with stores for ditto.

49. Twenty spare carriages, for various calibres.

50. Eighteen ditto.

51. Fifty spare limbers.

52. Ten 18 pounders, by 6 horses each.

53. Twenty waggons with stores for ditto, and 2 spare ones.

54. Twenty waggons with ammunition and stores.

55. Two 12 pounders, by 4 horses each.

56. Four waggons with stores for ditto.

57. Fifty waggons with stores.

58. A waggon with tools, and men to mend the roads.

59. A forge and waggon, by 4 horses each

60. A hundred waggons with stores, and 4 spare ones.

61. Four 2 and 1 pounders, by 1 horse each.

62. A hundred waggons with stores, and 3 spare ones.

63. Two hundred waggons, and 2 spare ones.

64. Two hundred and fourteen waggons belonging to the artillery baggage; some with 4, 3, and 2 horses each.

65. The artillery rear-guard.

66. The rear-guard from the army.

Horse Artillery.—The French horse artillery consists of 8 Prs. and 6 inch Howitzers.

The English of light 12 Prs. light 6 Prs. and light 5½ inch Howitzers.

The Austrian and Prussian horse artillery have 6 Prs. and 5½ inch Howitzers.

The United States by a law of April 12, 1808, authorised the raising of a regiment of horse artillery of ten companies, of the same number of officers and men as the artillery regiment of the old establishment to the company.

Officers of ARTILLERY. The commander of the army is commander in chief of the artillery; the colonels of artillery act under his orders; they are entrusted with one of the most laborious employments, both in war and peace, requiring the greatest ability, application, and experience. The officers in general should be good mathematicians, and engineers, should know all the powers of artillery, the attack and defence of fortified places; in a word, every thing which appertains to that very important corps.

ARTILLEUR, *Fr.* an officer belonging to the French service.

ARTILLIER, *Fr.* a man who works on pieces of ordnance as a founder; or one who serves them in action.

ARX, in the ancient military art, a fort, castle, &c. for the defence of a place.

ARZEGAGES, *Fr.* batons or canes with iron at both ends. They were carried by the Estradiots or Albanian cavaliers who served in France under Charles VIII. and Louis XII.

ASAPPES, or AZAPES, auxiliary troops which are raised among the Christians subject to the Turkish empire, These troops are generally placed in the front to receive the first shock of the enemy.

ASCENT. See GUNNERY.

ASPECT, is the view or profile of land or coast, and contains the figure or representation of the borders of any particular part of the sea. These figures and representations may be found in all the charts or directories for the sea coast. The Italians call them *demonstratione*. By means of this knowlege you may ascertain whether the land round the shore be high; if the coast itself be steep or sloping; bent in the form of an arc, or extended in strait lines; round at the top, or rising to a point. Every thing, in a word, is brought in a correct state before the eye, as far as regards harbors, swamps, bogs, gulphs, adjacent churches, trees, windmills, &c. See Reconnoitring *in Amer. Mil. Lib.*

A menacing Aspect. An army is said to hold a menacing aspect, when by advanced movements or positions it gives the opposing enemy cause to apprehend an attack.

A military Aspect. A country is said to have a military aspect, when its general situation presents appropriate obstacles or facilities for an army acting on the offensive or defensive.

An imposing Aspect, An army is said to have an imposing aspect, when it appears stronger than it really is. This appearance is often assumed for the purpose of deceiving an enemy, and may not improperly be considered as a principal *ruse de guerre*, or feint in war.

ASPIC, *Fr.* a piece of ordnance which carries a 12 pound shot. The piece itself weighs 42 50 pounds.

ASSAILLIR, *Fr.* to attack; to assail. This old French term applies equally to bodies of men and to individuals.

ASSAULT, a furious effort to carry a fortified post, camp, or fortress, where the assailants do not screen themselves by any works. While an assault during a siege continues, the batteries cease, for fear of killing their own men. An assault is sometimes made by the regiments that guard the trenches of a siege, sustained by detachments from the army.

To give an Assault, is to attack any post, &c.

To repulse an Assault, to cause the assailants to retreat, to beat them back.

To carry by Assault, to gain a post by storm, &c.

ASSAUT, *Fr.* See Assault.

ASSIEGER, *Fr.* to besiege.

ASSEMBLEE, *Fr.* the assembling together of an army. Also a *call*, or beat of the drum. See Assembly.

ASSEMBLY, the second beating of the drum before a march; at which the men strike their tents, if encamped, roll them up, and stand to arms. See Drum.

ASSESSMENT, in a military sense, signifies a certain rate which is paid in England by the county treasurer to the receiver-general of the land-tax, to indemnify any place for not having raised the militia; which sum is to be paid by the receiver-general into the exchequer. The sum to be assessed is five pounds for each man, where no annual certificate of the state of the militia has been transmitted to the clerk of the peace: if not paid before June yearly it may be levied on the parish officers. Such assessment where there is no county rate is to be raised as the poor's rate.

ASSIETTE. *Fr.* the immediate scite or position of a camp.

ASSOCIATION, any number of men embodied in arms for mutual defence in their district; and to preserve the public tranquility therein, against foreign or domestic enemies.

ASTRAGAL. See Cannon.

ATTACH. Officers and non-commissioned officers are said to be attached to the respective army, regiment, battalion, troop, or company with which they are appointed to act.

ATTACHE, *Fr.* the seal and signature of the colonel-general in the old French service, which were affixed to the commissions of officers after they had been duly examined.

ATTACK, any general assault, or onset, that is given to gain a post, or break a body of troops.

Attack *of a siege*, is a furious assault made by the besiegers by means of trenches, galleries, saps, breaches, or mines, &c. by storming any part of the front attack. Sometimes two attacks are carried on at the same time, between which a communication must be made. See Siege.

False Attacks are never carried on with that vigor and briskness that the others are; the design of them being to favor the true attack, by amusing the enemy and by obliging the garrison to severer duty in dividing their forces, that the true attack may be more successful.

Regular Attack, is that which is carried on in form, according to the rules of art. See Siege, approaches, &c.

To Attack *in front or flank*, in fortification, means to attack the saliant angle, or both sides of the bastion.

This phrase is familiarly used with respect to bodies of men which attack each other in a military way.

Attack *and Defence*. A part of the drill for recruits learning the sword exercise, which is commenced with the recruit stationary on horseback, the teacher riding round him, striking at different parts as openings appear, and instructing the recruit how to ward his several attacks; it is next executed in a walk, and, as the learner becomes more perfect, in speed; in the latter under the idea of a pursuit. The attack and defence in line and in speed form the concluding part of the sword exercise when practised at a review of cavalry. It is to be observed, that although denominated *in speed*, yet when practising, or at a review, the pace of the horse ought not to exceed *three quarters* speed.

ATTENTION, a cautionary word used as a preparative to any particular exercise or manœuvre. *Garde-á-vous*, which is pronounced *Gar-a-vous*, has the same signification in the French service.

ATTESTATION, a certificate made by some justice of the peace of the enlistment of a recruit. This certificate is to bear testimony, that the recruit has been brought before him in conformity to law and has declared his *assent* or *dissent* to such enlistment; and, if according to the law he shall have been, and is duly enlisted, that the proper oath has been administered to him by the said magistrate.

ATILT, in the attitude of thrusting with a spear, &c. as was formerly the case in tournaments, &c.

AVANT, *Fr.* foremost, most advanced toward the enemy, as

AVANT-*chemin-couvert*, Fr. The advanced covert-way which is made at the foot of the glacis to oppose the approaches of an enemy.

AVANT-*duc*, Fr. the pile-work which is formed by a number of young trees on the edge or entrance of a river. They are driven into the ground with battering rams or strong pieces of iron, to form a level floor, by means of strong planks being nailed upon it, which serve for the foundation of a bridge. Boats are placed wherever the *avant-duc* terminates The avant-duc is had recourse to when the river is so broad that there are not boats sufficient to make a bridge across Avant-ducs are made on each side of the river.

AVANT-*fossé*, Fr. the ditch of the counterscarp next to the country. It is dug at the foot of the glacis. See FORTIFICATION.

AVANT-*garde*. See VAN GUARD.

AVANT-*train*, Fr. The limbers of a field piece, on which are placed one or two boxes containing ammunition enough for immediate service.

AUDITOR, the person who audits regimental or other military accounts.

AVENUE, in fortification, is any kind of opening or inlet into a fort, bastion, or out-work.

AUGET, or AUGETTE, *Fr.* a wooden pipe which contains the powder by which a mine is set fire to.

AULNE *de Paris*, a French measure, containing 44 inches, used to measure sand-bags.

AUTHORITY, in a general acceptation of the term, signifies a right to command, and a consequent right to be obeyed. The appointment of officers in the army of the United States is in the nomination by the president, and approved by a majority of the Senate. The president may however dismiss at his discretion. The king of Great-Britain has the power to exercise military authority without controul, as far as regards the army; and may appoint or dismiss officers at his pleasure.

AUXILIARY. Foreign or subsidiary troops which are furnished to a belligerent power in consequence of a treaty of alliance, or for pecuniary considerations. Of the latter description may be considered the Hessians that were employed by Great-Britain to enslave America.

AWARD, the sentence or determination of a military court.

AXLE-TREE, a transverse beam supporting a carriage, and on the ends of which the wheels revolve. See CARRIAGES.

B.

BACK-*Step*, the retrogade movement of a man or body of men without changing front; it is half the forward step.

BACKWARDS, a technical word made use of in the British service to express the retrogade movement of troops from line into column, and *vice versa*. See WHEEL.

BAGGAGE, in military affairs, signifies the clothes, tents, utensils of divers sorts, and provisions, &c. belonging to an army.

BAGGAGE-*Waggons*. See WAGGONS.

BAGPIPE, the name of a musical warlike instrument, of the wind kind, used by the Scots regiments, and sometimes by the Irish. Bagpipes were used by the Danes; by the Romans, and by the Asiatics at this day; there is in Rome a most beautiful bas-relievo, a piece of Grecian sculpture of the highest antiquity, which represents a bag-piper playing on his instrument exactly like a modern highlander The Greeks had also an instrument composed of a *pipe* and *blown-up skin*. The Romans in all probability, borrowed it from them. The Italians still use it under the names of *piva* and *cornumusa* The Bagpipe has been a favorite instrument among the Scots. There are two varieties: the one with long pipes, and sounded with the mouth; the other with short pipes, filled with air by a bellows, and played on with the fingers: the first is the loudest and most ear-piercing of all music, is the genuine highland pipe, and is well suited to the warlike genius of that people. It formerly roused their courage to battle, alarmed them when secure, and collected them when scattered: solaced them in their long and painful marches, and in times of peace kept up the memory of the gallantry of their ancestors, by tunes composed after signal victories. The other is the Irish bagpipe.

BAGS, in military employments, are used on many occasions: as,

Sand-BAGS, generally 16 inches diameter, and 30 high, filled with earth or sand to repair breaches, and the embrasures of batteries, when damaged by the enemies fire, or by the blast of the guns. Sometimes they are made less, and placed three together, upon the parapets, for the men to fire through.

Earth-BAGS, containing about a cubical foot of earth, are used to raise a parapet in haste, or to repair one that is beaten down. They are only used when the ground is rocky, and does not afford earth enough to carry on the approaches.

BALANCE, *Fr.* a term used in the French artillery to express a machine in which stores and ammunition are weighed.

BALL, in the military art, comprehends all sorts of balls and bullets for fire-arms, from the cannon to the pistol.

Balls of Lead, of different kinds.

KINDS.	Number to one Pound.	Diameter in Inches.	No. made from one ton of Lead.
Wall pieces	6¼	.89	14,760
Musquets	14½	.68	32,480
Carabine	20	.60	44,800
Pistol	34	.51	78,048
7 Brl. guns	46½	.46	104,160

Lead balls are packed in boxes containing each 1 cwt. About 4 pounds of lead in the cwt. are generally lost in casting. See Shot.

Cannon-Balls are of iron; and musket and pistol-balls are of lead. Cannon-balls are always distinguished by their respective calibres, thus,

A 42	pound ball, the diameter of which is	6,684 inches.
32		6,105
24		5,547
18		5,040
12		4,403
9		4,000
6		3,498
3		2,775
2		2,423
1		1,923

Fire-Balls, } of which there are va-
Light-Balls, } rious sorts, used for various purposes. Their composition is mealed powder 2, saltpetre 1½, sulphur 1, rosin 1, turpentine 2½. Sometimes they are made of an iron shell, sometimes a stone, filled and covered with various coats of the above composition, until it conglomerates to a proper size; the last coat being of grained powder. But the best sort in our opinion, is to take thick brown paper, and make a shell the size of the mortar, and fill it with a composition of an equal quantity of sulphur, pitch, rosin, and mealed powder; which being well mixed, and put in warm, will give a clear fire, and burn a considerable time.

When they are intended to set fire to magazines, buildings, &c. the composition must be mealed powder 10, saltpetre 2, sulphur 4, and rosin 1; or rather mealed powder 48, saltpetre 32, sulphur 16, rosin 4, steel or iron filings 2, fir-tree saw-dust boiled in saltpetre ley 2, birch-wood charcoal 1, well rammed into a shell for that purpose, having various holes filled with small barrels, loaded with musket-balls; and lastly the whole immerged in melted pitch, rosin and turpentine oil.

Smoke-Balls are prepared as above, with this difference, that they contain 5 to 1 of pitch, rosin and saw-dust. This composition is put into shells made for that purpose, having 4 holes to let out the smoke. Smoke-balls are thrown out of mortars, and continue to smoke from 25 to 30 minutes.

Stink-Balls are prepared by a composition of mealed powder, rosin, saltpetre, pitch, sulphur, rasped horses and asses hoofs, burnt in the fire, assa-fœtida, seraphim gum or ferula, and bug or stinking herbs, made up into balls, as mentioned in *Light*-Balls, agreeably to the size of the mortar out of which you intend to throw them.

Poisoned Balls. We are not sure that they have ever been used in Europe; but the Indians and Africans have always been very ingenious at poisoning several sorts of warlike stores and instruments. Their composition is mealed powder 4, pitch 6, rosin 3, sulphur 5, assa-fœtida 8, extract of toad's poison 12, other poisonous substances 12, made into balls as above directed. At the commencement of the French Revolution poisoned balls were exhibited to the people said to have been fired by the Austrians, particularly at the siege of Lisle. We have seen some of this sort. They contained glass, small pieces of iron, &c. and were said to be concocted together by means of a greasy composition which was impregnated with poisonous matter. In 1792, they were deposited in the Archives of Paris.

Red-hot Balls are fired out of mortars, howitzers, or cannon. Use which you will, the ball must be made red-hot, which is done upon a large coal fire in a square hole made in the ground, 6 feet every way, and 4 or 5 feet deep. Some make the fire under an iron grate, on which the shell or ball is laid; but the best way is to put the ball into the middle of a clear burning fire, and when red-hot, all the fiery particles must be swept off. Whatever machine you use to throw the red-hot ball out of, it must be elevated according to the distance you intend it shall range, and the charge of powder must be put into a flannel cartridge, and a good wad upon that; then a piece of wood of the exact diameter of the piece, and about 3½ inches thick, to prevent the ball from setting fire to the powder; then place the ball on the edge of the mortar, &c. with an instrument for that purpose, and let it roll of itself against the wood, and instantly fire it off. Should there be a ditch or parallel before such a battery, with soldiers, the wood must not be used, as the blast of powder will break it to pieces, and its own elasticity prevent it from flying far; it would in that case either kill or wound your own people. For this deficiency the wad must be double. See *American Mil. Lib.* article Artillery.

Chain-Balls are two balls linked together by a chain of 8 or 10 inches long, and some have been made with a chain of 3 or 4 feet long; they are used to destroy the pallisadoes, wooden bridges, and chevaux-de-friezes of a fortification. They are also very destructive to the rigging of a ship.

Stang-Balls are by some called balls of two heads; they are sometimes made of two half-balls joined together by a bar of iron from 8 to 14 inches long; they are likewise made of two entire balls; they are for the same purpose as the before-mentioned.

Anchor-Balls are made in the same way as the light-balls, and filled with the same composition, only with this addition, that these are made with an iron bar two-thirds of the ball's diameter in length, and 3 or 4 inches square. One half is fixed within the ball, and the other half remains without; the exterior end is made with a grapple-hook. Very useful to set fire to woopen bridges, or any thing made of wood, or even the rigging of ships, &c. for the pile end being the heaviest, flies foremost, and wherever it touches, fastens, and sets all on fire about it.

Message-Balls. See Shells.

BALLIUM, a term used in ancient military history. In towns the appellation of ballium was given to a work fenced with pallisades, and sometimes to masonry, covering the suburbs; but in castles it was the space immediately within the outer wall.

BALLOON, a hollow vessel of silk, varnished over and filled with inflammable air, by which means it ascends in the atmosphere. It has during the war been used by the French in reconnoitering, and with great success at Fleurus.

BALOTS, *Fr.* sacks or bales of wool, made use of in cases of great emergency, to form parapets or places of arms. They are likewise adapted for the defence of trenches, to cover the workmen in saps, and in all instances where promptitude is required.

BAN, *or* Bann, a sort of proclamation made at the head of a body of troops, or in the several quarters or cantonments of an army, by sound of trumpet, or beat of drum; either for observing martial discipline, or for declaring a new officer, or punishing a soldier, or the like. At present such kind of proclamations are given out in the written orders of the day.

BAN and Arriere Ban, a French military phrase signifying the convocation of vassals under the feudal system. Ménage, a French writer, derives the term from the German word *ban*, which means *publication;* Nicod derives it from another German term which signifies *field*. Borel from the Greek *pan* which means *all*, because the convocation was general. In the reign of Charles VII. the *ban* and *arriere ban* had different significations. Formerly it meant the assembling of the ordinary militia. After the days of Charles VII. it was called the extraordinary militia. The first served more than the latter; and each was distinguished according to the nature of its particular service. The persons belonging to the arriere-ban were at one period accoutred and mounted like light-horse; but there were occasions on which they served like the infantry. Once under Francis I. in 1545, and again under Lewis XIII. who issued out an order in 1637, that the Arriere-Ban should serve on foot.

Ban likewise signified during the ancient monarchy of France, a proclamation made by the sound of drums, trumpets, and tamboirines, either at the head of a body of troops, or in quarters. Sometimes to prevent the men from quitting camp, at others to enforce the rigor of military discipline; sometimes for the purpose of receiving a new commanding officer, and at others to degrade a military character.

BANDER, *Fr.* to unite, to intrigue together for the purposes of insurrection.

BANDERET, in military history, implies the commander in chief of the troops of the canton of Berne, in Switzerland.

BANDES, *Fr.* bands, bodies of infantry.

Bandes *Francoises.* The French infantry was anciently so called. The term, however, become less general and was confined to the *Prévôt des Bandes*, or the Judge or Prevost marshal that tried the men belonging to the French guards.

BANDIERES, *Fr.* Une Armée rangée en front de *bandieres*, signifies an army in battle array. This disposition of the army is opposed to that in which it is cantoned and divided into several bodies.

BANDOLEER, in ancient military history, a large leathern belt worn over the right shoulder, and hanging under the left arm, to carry some kind of warlike weapon.

Bandoliers were likewise little wooden cases covered with leather, of which every musqueteer used to wear 12 hanging on a shoulder-belt; each of them contained the charge of powder for a musquet.

BANDROLS.
BANNEROLS. } See Camp Colors.

BANDS, properly bodies of foot, though almost out of date.

Train-Bands. In England the militia of the City of London were generally so called. The third regiment of Foot or the Old Buffs were originally recruited from the Train bands, which circumstance gave that corps the exclusive privilege of marching through London with drums beating and colors flying. They lost their colors in America, which are now in the war-office at Washington.

Band *of Music.* The term *band* is applied to the body of musicians attached to any regiment or battalion, with wind instruments.

Band is also the denomination of a military order in Spain, instituted by Alphonsus XI. king of Castile, for the younger sons of the nobility, who, before their admission, must serve 10 years, at least, either in the army or during a war; and are bound to take up arms in defence of the Catholic faith, against the infidels.

BANERET, *Fr.* a term derived from Baniere, This appellation was attached to any lord of a fief who had vassals sufficient to unite them under one *banier* or *banner*, and to become chief of the troops or company.

Un Chevalier **Banneret**, or a *Knight* **Banneret** gave precedence to the troop or company which he commanded over that of a baneret who was not a knight or chevalier; the latter obeyed the former, and the banner of the first was cut into fewer vanes than that of the second.

BANNERET, *Knights-bannerets*, according to the English acceptation of the term, are persons who for any particular act of valor were formerly knighted on the field of battle.

BANQUET. See **Bridges.**

BANQUETTE. See **Fortification.**

BAR, a long piece of wood or iron. Bars have various denominations in the construction of artillery carriages, as sweep and cross bars for tumbrils: fore, hind and under cross bars, for powder carts; shaft bars for waggons, and dowel bars used in mortar beds.

Bar *Shot*, two half bullets joined together by an union bar, forming a kind of double headed shot.

BARB, the reflected points of the head of an arrow. The armor for horses was so called. See **Caparison.**

BARBACAN, or **Barbican**, a watch-tower, for the purpose of descrying an enemy at a great distance: it also implies an outer defence, or sort of ancient fortification to a city or castle, used especially as a fence to the city or walls; also an aperture made in the walls of a fortress to fire through upon the enemy. It is sometimes used to denote a fort at the entrance of a bridge, or the outlet of a city, having a double wall with towers.

BARBETS were peasants of Piedmont, who abandoned their dwellings when an enemy has taken possession of them. They formed into bodies and defended the Alps.

Barbet-*Battery*, in gunnery, is when the breast-work of a battery is only so high, that the guns may fire over it without being obliged to make embrasures: in such cases, it is said the guns fire *en barbette*. See **Battery.**

BARDEES *d'eau*, Fr. a measure used in the making of saltpetre, containing three half-hogsheads of water, which are poured into tubs for the purpose of refining it. Four half-hogsheads are sometimes thrown in.

BARILLER, *Fr.* an officer employed among the gallies, whose chief duty was to superintend the distribution of bread and water.

BARRACKS, or **Baracks**, are places erected for both officers and men to lodge in; they are built different ways, according to their different situations. When there is sufficient room to make a large square, surrounded with buildings, they are very convenient, because the soldiers are easily contained in their quarters; and the rooms being contiguous, orders are executed with privacy and expedition; and the soldiers have no connection but with those who instruct them in their duty.

Barrack-*Allowance*, a specific allowance of bread, beer, wood, coals, &c. to the regiments stationed in barracks. See **Ration.**

Barrack-*Guard*, when a regiment is in barracks, the principal guard is the barrack-guard; the officer being responsible for the regularity of the men in barracks, and for all prisoners duly committed to his charge while on that duty.

Barrack-*Master General*, a staff officer at the head of the barrack department; he has a number of barrack-masters and deputies under him, who are stationed at the different barracks; he has an office and clerks for the dispatch of business; to this office all reports, &c. respecting the barrack department are made. This is a British sinecure office.

Barrack-*Office*: the office at which all business relating to the Barrack department is transacted.

BARRELS, in military affairs, are of various kinds.

Fire-**Barrels** are of different sorts: some are mounted on wheels, filled with composition and intermixed with loaded grenades, and the outside full of sharp spikes: some are placed under ground, which have the effect of small mines: others are used to roll down a breach, to prevent the enemy's entrance.—Composition, corned powder 30lb. Swedish pitch 12, saltpetre 6, and tallow 3. Not used now.

Thundering-**Barrels** are for the same purpose, filled with various kinds of combustibles, intermixed with small shells, grenades, and other fire-works. Not used now.

Powder-**Barrels** are about 16 inches diameter, and 30 or 32 inches long, holding 100 pounds of powder.

Barrels *for powder*—Their dimensions.

	Whole Barrels.		*Half Barrels.*		*Quarter Barrels*	
	Ft.	*In.*	*Ft.*	*In.*	*Ft.*	*In.*
Depth . . .	1	9.61	1	5.13	1	2.25
Diameter at top	1	3.61	1	0.37		9.35
—— at bulge	1	5.36	1	2.		10.71
—— at bot'm	1	3.51	1	0.31		9.41

The whole barrels are made to contain 100 pounds, and the half barrels 50 pounds of powder; but of late only 90 pounds have been put into the barrels, and 45 into the half barrels; which, by leaving the powder room to be shifted, preserves it the better.

Budge BARRELS, hold from 40 to 60 pounds of powder; at one end is fixed a leather bag with brass nails: they are used in actual service on the batteries, to keep the powder from firing by accident, for loading the guns and mortars.

Budge-Barrels contain 38 lbs.

Weight of barrel—copper hooped—10 lbs.

Weight of barrel—hazle hooped—6lbs.

Length of barrel—hazle hooped—10½ inches

Diameter of barrel—hazle hooped—1 foot 1 inch.

BARRICADE. To barricade is to fortify with trees, or branches of trees, cut down for that purpose, the brushy ends towards the enemy. Carts, waggons, &c. are sometimes made use of for the same purpose, viz. to keep back both horse and foot for some time. ABATIS.

BARRIER, in a general sense means any fortification, or strong place on the frontiers of a country. It is likewise a kind of fence composed of stakes, and transums, as overthwart rafters, erected to defend the entrance of a passage, retrenchment, or the like. In the middle of the barrier is a moveable bar of wood, which is opened and shut at pleasure. It also implies a gate made of wooden bars, about 5 feet long, perpendicular to the horizon, and kept together by two long bars going across, and another crossing diagonally: Barriers are used to stop the cut made through the esplanade before the gate of a town.

BARRIER-*Towns*, in military history, were Menin, Dendermond, Ypres, Tournay, Mons, Namur, and Maestricht. These towns were formerly garrisoned half by French or Imperial, and half by Dutch troops.

BARM, *or* BERM. See BERM.

BASCULE, *Fr.* a counterpoise which serves to lift up the draw bridge of a town. Likewise a term used in fortification to express a door that shuts and opens like a trap door.

BASE, *or* BASIS, in fortification, the exterior part or side of a polygon, or that imaginary line which is drawn from the flanked angle of a bastion to the angle opposite to it.

BASE signifies also the level line on which any work stands that is even with the ground, or other work on which it is erected. Hence the base of a parapet is the rampart.

BASE, an ancient word for the smallest cannon See CANNON.

BASE-*line*, the line on which troops in column move, the first division that marches into the alignement forms the base line, or *appui* which each successive division prolongs.

BASE-*ring*. See CANNON.

BASILISK, an ancient name given to a 48 pounder. See CANNON.

BASIS, the same as BASE.

BASKET-*Hilt*, the hilt of a sword, so made as to contain, and guard the whole hand.

BASKETS, in military affairs, are simple baskets, frequently used in sieges. They are filled with earth, and placed on the parapet of the trench, or any other part. They are generally about a foot and a half in diameter at the top, and eight inches at the bottom, and a foot and a half in height; so that, being placed on the parapet, a kind of embrasure is formed at the bottom, through which the soldiers fire, without being exposed to the shot of the enemy. See GABION.

BASKETS.—Ballast, ⅛ bushel—weight 5 lbs.

Diameter, 1 foot 6 inches—length 1 foot.

BASTILIE, *Fr.* any place fortified with towers.

BASTILIE, a state prison which stood near the Temple in Paris, and was deservedly destroyed by the inhabitants of that capital on the 14th of July, 1789.

BASTINADO, a punishment among the Turkish soldiers, which is performed by beating them with a cane or flat of a sword on the soles of their feet.

BASTION. See FORTIFICATION.

BASSE-*Enceinte*. See FAUSSE-*Braye*.

BASSINET, *Fr.* the pan of a musquet.

BASSON *or* BASSOON, a wind instrument blown with a reed, performing the base to all martial music, one or two of which are attached to each regimental band.

BAT DE MULET, a pack-saddle used on service when mules are employed to carry stores, &c.

BATAGE. *Fr.* the time employed in reducing gun-powder to its proper consistency. The French usually consumed 24 hours in pounding the materials to make good gun-powder; supposing the mortar to contain 16 pounds of composition, it would require the application of the pestle 3500 times each hour. The labour required in this process is less in summer than in winter, because the water is softer.

BATAILLE, *Fr.* a battle.

Cheval de BATAILLE, *Fr.* a war horse, or charger. This expression is used figuratively as a sheet anchor or last resource.

BATAILLER, *Fr.* to struggle hard.

BATARDE, French 8 pounders were so called.

BATARDEAU, in fortification, is a massive perpendicular pile of masonry, whose length is equal to the breadth of the ditch, inundation, or any part of a fortification where the water cannot be kept in without the raising of these sorts of works, which are described either on the capitals prolonged of the bastions or half-moons, or upon their faces. In thickness it is from 15 to 18 feet, that it may be able to withstand the violence of the enemy's batteries. Its height depends upon the depth of the ditch, and upon the height of the water that is necessary to be kept up for an inundation; but the top of the building must always be under the cover of the parapet of the covert way, so as not to be exposed to the enemy's view. In the middle of its length is raised a massive cylindrical turret, whose height exceeds the batardeau 6 feet.

BATESME *du Tropique*, Fr. a christening under the line. This is a ridiculous ceremony which every person is obliged to go through the first time he crosses the Line on his passage to the East-Indies. Different methods of performing it are observed by different nations. Englishmen frequently buy themselves off. Among the French, the individual who was to be baptized or christened, swore that he would individually assist in forcing every person hereafter, who should be similarly situated, to go through the same ceremony. A barbarous usage.

BAT-*Horses*, **BAW**-*Horses*, are baggage horses belonging to the officers when on actual duty.

Bat-*Men*, **Baw**-*Men*, were originally servants hired in war time, to take care of the horses belonging to the train of artillery, bakery, baggage, &c. Men who are excused regimental duty, for the specific purpose of attending to the horses belonging to their officers, are called bat-men.

Knights of the **BATH**, an English military order of uncertain original. After long decay, this order was revived under George I. by a creation of a considerable number of knights. They wear a red riband, and their motto is, *Tria juncta in uno*, alluding to the three cardinal virtues which every knight *ought to possess!*

BATON, *Fr.* a staff. See Staff.

Baton *a deux bouts*, Fr. a quarter-staff.

Baton *de commandement*, Fr. an instrument of particular distinction which was formerly given to generals in the French army. Henry III. before his accession to the throne was made generalissimo of all the armies belonging to his brother Charles the IX. and publicly received the Baton, as a mark of high command.

Baton *ferrat et non ferrat*, Fr. all sorts of weapons.

Obtènir son object par le tour du **Baton**, *Fr.* to accomplish one's ends by equivocal means.

Etre bien assurè de son **Baton**, *Fr.* to be morally certain of a thing.

Etre reduit au **Baton** *blanc*, to be reduced to your last stake.

A **Batons** *rompus*, Fr. to do any thing by fits and starts, to be undecided in your plans of attack, &c.

BATOON, a truncheon, or marshal's staff.

BATTAILOUS, a warlike or military appearance.

BATTALIA, Johnson adopts the word from Battaglia, Ital. and calls it the main body of an army, distinguished from its wings. It also implies an army or considerable detachment of troops drawn up in order of battle, or in any other proper form to attack the enemy. See Battle.

BATTALION, an undetermined body of infantry in regard to number, generally from 500 to 1000 men. In the United States the usage is various, as it is in all other countries. The United States regiment of artillery consists of 20 companies, which form five battalions; the other regiments infantry and artillery, consist of ten companies of each, so that each regiment must form two battalions of five companies each. The militia regiments in most of the states consist of 1000 men, composing two battalions of 500 men each, being perhaps the most perfect organization for a battalion.

The French call their military corps which answer to our regiments, *demi brigades*, these usually consist of three battalions of 1500 men each; when two of the battalions of a demi brigade are in the field the other is in quarters or recruiting and disciplining the young soldiers, who are thus drafted from their regimental depots.

On the British establishment the companies of grenadiers and light infantry-men having been detached from their several corps and formed into separate battalions; the British guards at present consist of 9 battalions. The different companies are likewise considerably augmented; so that it is impossible to affix any specific standard to their complement of men. The English royal regiment of artillery consists of 4 battalions. Sometimes regiments consist each of 1 battalion only; but if more numerous, are divided into several battalions, according to their strength; so that every one may come within the numbers mentioned. A battalion in one of the English marching regiments consists of 1000, and sometimes of 1200 men, officers and non-commissioned included. When there are companies of several regiments in a garrison to form a battalion, those of the eldest regiment post themselves on the right, those of the second on the left, and so on until the youngest fall into the centre. The officers take their posts before their companies, from the right and left, according to seniority. Each battalion is divided into 4 divisions, and each division into two sub-divisions, which are again divided into sections. The companies of grenadiers being unequal in all battalions, their post must be regulated by the commanding officer. See Regiment.

Triangular **Battalion**, in ancient military history, a body of troops ranged in the form of a triangle, in which the ranks exceed each other by an equal number of men: if the first rank consists of one man only, and the difference between the ranks is only one, then its form is that of an equilateral triangle; and when the difference between the ranks is more than one, its form may then be an isoscele; having two sides equal, or scalene triangle. This method is now laid aside.

BATTER, a cannonade of heavy ordnance, from the 1st or 2d parallel of entrenchment, against any fortress or works.

To **BATTER** *in breach*, implies a heavy cannonade of many pieces directed to one part of the revetement from the third parallel.

BATTERING, in military affairs, implies the firing with heavy artillery on some fortification or strong post possessed by an enemy, in order to demolish the works.

BATTERING-*Pieces*, are large pieces of cannon, used in battering a fortified town or post

It is judged by all nations, that no less than 24 or 18 pounders are proper for that use Formerly much larger calibres were used, but, as they were so long and heavy, and very troublesome to transport and manage, were for a long time rejected, till adopted among the French, who during the present war have brought 36 and 42 pounders into the field.

BATTERING-*Train*, a train of artillery used solely for besieging a strong place, inclusive of mortars and howitzers: all heavy 24, 18, and 12 pounders, come under this denomination; as likewise the 13, 10, and 8 inch mortars and howitzers.

BATTERING-*Ram*. See the article **RAM**.

BATTERIE *de Tambour*, a French beat of the drum similar to the *general* in the British service

BATTERIE *en roüage*, Fr. is used to dismount the enemy's cannon.

BATTERIE *par camarades*, Fr. the discharge of several pieces of ordnance together, directed at one object or place.

BATTERY, in military affairs, implies any place where cannon or mortars are mounted, either to attack the forces of the enemy, or to batter a fortification: hence batteries have various names, agreeably to the purposes they are designed for.

Gun-**BATTERY**, is a defence made of earth faced with green sods or fascines, and sometimes made of gabions filled with earth: it consists of a *breast-work parapet*, or *epaulement*, of 18 or 20 feet thick at top, and of 22 or 24 at the foundation; of a ditch 12 feet broad at the bottom, and 18 at the top, and 7 feet deep. They must be 7½ feet high. The embrasures are 2 feet wide within, and 9 without, sloping a little downwards, to depress the metal on occasion. The distance from the centre of one embrasure to that of the other is 18 feet; that is, the guns are placed at 18 feet distance from each other; consequently the *merlons* (or that part of solid earth between the embrasures) are 16 feet within, and 7 without. The *genouilliers* (or part of the parapet which covers the carriage of the gun) are generally made 2½ feet high from the platform to the opening of the embrasures; though this height ought to be regulated according to the semi-diameter of the wheels of the carriage, or the calibre of the gun. The platforms are a kind of wooden floors, made to prevent the cannon from sinking into the ground, and to render the working of the guns more easy; and are, strictly speaking, a part of the battery. They are composed of 5 sleepers, or joists of wood, laid lengthways, the whole length of the intended platform; and to keep them firm in their places, stakes must be driven into the ground on each side: these sleepers are then covered with sound thick planks, laid parallel to the parapet; and, at the lower end of the platform, next to the parapet, a piece of timber 6 inches square, called a *hurter*, is placed, to prevent the wheels from damaging the parapet. Platforms are generally made 18 feet long, 15 feet broad behind, and 9 before, with a slope of about 9 or 10 inches, to prevent the guns from recoiling too much, and for bringing them more easily forward when loaded The dimensions of the platforms, sleepers, planks, hurters, and nails, ought to be regulated according to the nature of the pieces that are to be mounted.

The powder magazines to serve the batteries ought to be at a convenient distance from the same, as also from each other; the large one, at least 55 feet in the rear of the battery, and the small ones about 25. Sometimes the large magazines are made either to the right or left of the battery, in order to deceive the enemy; they are generally built 5 feet under ground; the sides and roof must be well secured with boards, and covered with earth, clay, or something of a similar substance, to prevent the powder from being fired: they are guarded by centinels. The balls are piled in readiness beside the merlons between the embrasures.

The officers of the artillery ought always to construct their own batteries and platforms, and not the engineers, as is practised in the English service; for certainly none can be so good judges of those things as the artillery officers, whose daily practice it is; consequently they are the properest people to direct the situation and to superintend the making of batteries on all occasions.

Mortar-**BATTERY**. This kind of battery differs from a gun-battery, only in having no embrasures. It consists of a parapet of 18 or 20 feet thick, 7½ high in front, and 6 in the rear; of a berm 2½ or 3 feet broad, according to the quality of the earth; of a ditch 24 feet broad at the top, and 20 at the bottom. The beds must be 9 feet long, 6 broad, 8 from each other, and 5 feet from the parapet: they are not to be sloping like the gun platforms, but exactly horizontal. The insides of such batteries are sometimes sunk 2 or 3 feet into the ground, by which they are much sooner made than those of cannon. The powder magazines and piles of shells are placed as is mentioned in the article GUN-BATTERY.

Ricochet-BATTERY, so called by its inventor M. Vauban, and first used at the siege of Aeth in 1697. It is a method of firing with a very small quantity of powder, and a little elevation of the gun, so as just to fire over the parapet, and then the shot will roll along the opposite rampart, dismounting the cannon, and driving or destroying the troops. In a siege they are generally placed at about 300 feet before the first parallel, perpendicular to the faces produced, which they are to enfilade. Ricochet practice is not confined to cannon alone; small mortars and howitzers may effectually be used for the same purpose. They are of singular use in action to enfilade an enemy's ranks; for when the men perceive the shells rolling and bouncing about with their fuzes burning, expecting them to burst every moment, the bravest among them will hardly have courage to wait their approach and face the havoc of their explosion.

Horizontal BATTERIES are such as have only a parapet and ditch; the platform being only the surface of the horizon made level.

Breach or *Sunk* BATTERIES are such as are sunk upon the glacis, with a design to make an accessible breach in the faces or saliant angles of the bastion and ravelin.

Cross BATTERIES are such as play athwart each other against the same object, forming an angle at the point of contact; whence greater destruction follows, because what one shot shakes, the other beats down.

Oblique BATTERIES or *Batteries en Echarpe*, are those which play on any work obliquely, making an obtuse angle with the line of range, after striking the object.

Enfilading BATTERIES are those that sweep or scour the whole length of a strait line, or the face or flank of any work.

Sweeping BATTERIES. See *Enfilading*-BATTERIES.

Redan BATTERIES are such as flank each other at the saliant and rentrant angles of a fortification.

Direct BATTERIES are those situated opposite to the place intended to be battered, so that the balls strike the works nearly at right angles.

Reverse BATTERIES are those which play on the rear of the troops appointed to defend the place.

Glancing BATTERIES are such whose shot strike the object at an angle of about 20°, after which the ball glances from the object, and recoils to some adjacent parts.

Joint BATTERIES, }
Camarade BATTERIES, } when several guns fire on the same object at the same time. When 10 guns are fired at once, their effect will be much greater than when fired separately.

Sunk BATTERIES are those whose platforms are sunk beneath the level of the field; the ground serving for the parapet; and in it the embrasures are made. This often happens in mortar, but seldom in gun-batteries. BATTERY sometimes signifies the guns themselves placed in a battery.

Fascine BATTERIES, }
Gabion BATTERIES, } are batteries made of those machines, where sods are scarce, and the earth very loose or sandy. For a particular detail of all kinds of batteries, see *Toussard's Artillerist*, No. I. c. I.

BATTERY.—Dimensions of Batteries.

1. *Gun* BATTERIES.—Gun Batteries are usually 18 feet per gun. Their principal dimensions are as follow:

Ditch—Breadth - - 12 feet.
Depth - - - - 8

Note.—These dimensions give for a battery of two guns 3456 cubic feet of earth; and must be varied according to the quantity required for the epaulment.

Epaulement—Breadth at bottom 23 feet.
——— at top 18
Height within 7
——— without 6 ft. 4 in.
Slope, interior 2-7 of h'gt.
——— exterior 1 2 of h'gt.

Note.—The above breadths at top and bottom are for the worst soil; good earth will not require a base of more than 20 feet wide, which will reduce the breadth at top to 15 feet; an epaulement of these dimensions for two guns will require about 4200 cubic feet of earth, and deducting 300 cubic feet for each embrazure, leaves 3600 required for the epaulement. In confined situations the breadth of the epaulement may be only 12 feet.

Embrazures—Distance between their centers } 18 feet
Openings, interior 20 inc.
——— exterior 9 feet
Height of the sole above the platform - - 32 inc.

Note.—Where the epaulement is made of a reduced breadth, the openings of the embrazures are made with the usual breadth within, but the exterior openings proportionably less. The embrazures are sometimes only 12 feet asunder, or even less when the ground is very confined. The superior slope of the epaulement need be very little, where it is not to be defended by small arms. The slope of the sole of the embrazures must depend upon the height of the object to be fired a

The *Berm* is usually made 3 feet w

and where the soil is loose, this breadth is increased to 4 feet.

2. *Howitzer* BATTERIES.—The dimensions of howitzer batteries are the same as those for guns, except that the interior openings of the embrazures are 2 feet 6 inches, and the soles of the embrazures have a slope inwards of about 10 degrees.

3. *Mortar* BATTERIES—Are also made of the same dimensions as gun batteries, but an exact adherence to those dimensions is not so necessary. They have no embrazures. The mortars are commonly placed 15 feet from each other, and about 12 feet from the epaulement.

Note.—Though it has been generally customary to fix mortars at 45°, and to place them at the distance of 12 feet from the epaulement, yet many advantages would often arise from firing them at lower angles, and which may be done by removing them to a greater distance from the epaulement, but where they would be in equal security. If the mortars were placed at the undermentioned distances from the epaulement, they might be fired at the angles corresponding:

At 13 feet distance for firing at 30 degrees.
21 - - - - - 20
30 - - - - - 15
40 - - - - - 10

over an epaulment of 8 feet high.

A French author asserts, that all ricochet batteries, whether for howitzers or guns, might be made after this principle, without the inconvenience of embrazures; and the superior slope of the epaulement being inwards instead of outwards, would greatly facilitate this mode of firing.

If the situation will admit of the battery being sunk, even as low as the soles of the embrazures, a great deal of labour may be saved. In batteries without embrazures, this method may almost always be adopted; and it becomes in some situations absolutely necessary in order to obtain earth for the epaulement; for when a battery is to be formed on the crest of the glacis, or on the edge of the counterscarp of the ditch, there can be no excavation but in the rear of the battery.

4. BATTERIES *on a coast*—generally consist of only an epaulement, without much attention being paid to the ditch; they are, however, sometimes made with embrazures, like a common gun battery; but the guns are more generally mounted on traversing platforms, and fire over the epaulement. When this is the case, the guns can seldom be placed nearer than 3½ fathoms from each other. The generality of military writers prefer low situations for coast batteries; but M. Gribauvale lays down some rules for the heights of coast batteries, which place them in such security, as to enable them to produce their greatest effect. He says the height of a battery of this kind, above the level of the sea, must depend upon the distance of the principal objects it has to protect or annoy. The shot from a battery to ricochet with effect, should strike the water at an angle of about 4 or 5 degrees at the distance of 200 yards. Therefore the distance of the object must be the radius, and the height of the battery the tangent to this angle of 4 or 5°; which will be, at the above distance of 200 yards, about 14 yards. At this height, he says, a battery may ricochet vessels in perfect security; for their ricochet being only from a height of 4 or 5 yards, can have no effect against the battery. The ground in front of a battery should be cut in steps, the more effectually to destroy the ricochet of the enemy. In case a ship can approach the battery so as to fire musquetry from her tops, a few light pieces placed higher up on the bank, will soon dislodge the men from that position, by a few discharges of case shot. It is also easy to keep vessels at a distance by carcasses, or other fire balls, which they are always in dread of.

D'urtubie estimates, that a battery of 4 or 5 guns, well posted, will be a match for a first rate man of war.

To estimate the materials for a battery.

Fascines of 9 feet long are the most convenient for forming a battery, because they are easily carried, and they answer to most parts of the battery without cutting. The embrazures are however better lined with fascines of 18 feet. The following will be nearly the number required for a fascine battery of two guns or howitzers:

90 fascines of 9 feet long.

20 fascines of 18 feet—for the embrazures.

This number will face the outside as well as the inside of the epaulement, which if the earth be stiff, will not always be necessary; at least not higher than the soles of the embrazures on the outside. This will require five of 9 feet for each merlon less than the above.

A mortar battery will not require any long fascines for the lining of the embrazures. The simplest method of ascertaining the number of fascines for a mortar battery, or for any other plain breast work, is to divide the length of work to be fascined in feet, by the length of each fascine in feet, for the number required for one layer, which being multiplied by the number of layers required, will of course give the number of fascines for facing the whole surface. If a battery be so exposed as to require a shoulder to cover it in flank, about 50 fascines of 9 feet each will be required for each shoulder.

Each fascine of 18 feet will require 7 pickets.

Each fascine of 9 feet will require 4 pickets.

12 workmen of the line, and 8 of the artillery, are generally allotted to each gun.

If to the above proportion of materials, &c. for a battery of two guns, there be added for each additional gun, 30 fascines of 9 feet, and 10 of 18 feet, with 12 workmen, the quantity may easily be found for a battery of any number of pieces.

The workmen are generally thus disposed; one half the men of the line in the ditch at 3 feet asunder, who throw the earth upon the berm; one fourth upon the berm at 6 feet asunder, to throw the earth upon the epaulement, and the other quarter on the epaulement, to level the earth, and beat it down. The artillery men carry on the fascine work, and level the interior for the platforms. This number of workmen may complete a battery in 36 hours, allowing 216 cubic feet to be dug and thrown up, by each man *in the ditch* in 24 hours.

Tools for the construction of the battery.

Intrenching—1½ times the number of workmen required; half to be pick axes, and half shovels or spades, according to the soil.

Mallets—3 per gun.

Earth Rammers—3 per gun.

Crosscut Saws—1 to every two guns.

Axes or *Hatchets*—2 per gun.

This estimate of tools and workmen, does not include what may be required for making up the fascines, or preparing the other materials, but supposes them ready prepared. For these articles, see the words *Fascine*, *Gabion*, *Platform*, &c. and for the construction of field magazines for batteries, see the word *Magazine*.

Note. The following estimate of the quantity of earth which may be removed by a certain number of workmen in a given time, may serve to give some idea of the time required to raise any kind of works. 500 common wheel barrows will contain 2 cubic toises of earth, and may be wheeled by one man, in summer, to the distance of 20 yards up a ramp, and 30 on a horizontal plain, in one day. In doing which he will pass over, going and returning, about 4 leagues in the first case, and 6 in the last. Most men, however, will not wheel more than 1¼ toise per day. Four men will remove the same quantity to four times the distance.

In a soil easy to be dug, one man can fill the 500 barrows in a day; but if the ground be hard, the number of fillers must be augmented, so as to keep pace with the wheel barrow man.

BATTERY-*Planks* are those planks or boards used in making platforms.

BATTERY-*Boxes* are square chests or boxes, filled with earth or dung; used in making batteries, where gabions and earth are not to be had. They must not be too large, but of a size that is governable.

BATTERY-*Nails* are wooden pins made of the toughest wood, with which the planks that cover the platforms are nailed. Iron nails might strike fire against the iron-work of the wheels, in recoiling, &c. and be dangerous.

BATTERY-*Master*, whose duty formerly it was to raise the batteries. This officer is now out of use.

BATTEURS *d'Estrade*. See SCOUTS.

BATTLE, implies an action, where the forces of two armies are engaged; and is of two kinds, *general* and *particular*, general where the whole army is engaged, and particular where only a part is in action; but as they only differ in numbers, the methods are nearly alike.

There is no action in war more brilliant than that of pitched battles. Their success sometimes decides the fate of nations. It is by this action a general acquires reputation. It is in battle that his valour, his force of genius, and his prudence, appear in their full extent; and where especially he has occasion for that firmness of mind, without which the most able general will hardly succeed.

Battles have ever been the last resource of good generals. A situation where chance and accident often baffle and overcome the most prudential and most able arrangements, and where superiority in numbers by no means ensures success, is such as is never entered into without a clear necessity for so doing. The fighting a battle only because the enemy is near, or from having no other formed plan of offence, is not the way of making war. Darius lost his crown and life by it: Harold, of England, did the same; and Francis I. at Pavia, lost the battle and his liberty. King John, of France, fought the battle of Poictiers, though ruin attended his enemy if he had not fought. The king of Prussia lost his country, and the reputation which Prussia acquired from Frederick II. by the battle of Jena.

A skilful general will give battle when his army's situation cannot be worse, if defeated, than if it does not fight at all; and when the advantage may be great, and the loss little. Such was the duke of Cumberland's at Hastenbeck, in 1757, and prince Ferdinand's at Vellinghausen, in 1761. The reasons and situations for giving battle are so numerous, that to treat of them all would fill a large volume; the following are a few exigencies of state they require an army to attack the enemy at all events. Such were the causes of the battle of Blenheim, in 1704, of Zorndorff, in 1758, of Cunnersdorff, in 1759, and of Rosbach, in 1757, of Austerlitz, in 1805. An army is also obliged to engage when shut up in a post. An army may give battle to effect its junction with another army, &c.

The preparations for battle admit of infinite variety. By a knowlege of the detail of battles, the precept will accompany the example. The main general preparations are, to profit by any advantage of ground; that the tactical form of the army be in some measure adapted to it; and that such form be, if possible, a form tactically better than the enemy's; and, in forming the army, to have a most careful attention to multiply resources, &c

that the fate of the army may not hang on one or two efforts; to give any particular part of the army, whose quality is superior to such part in the enemy's army, a position that ensures action; and finally, to have a rear by nature, or if possible, by art, capable of checking the enemy in case of disaster.

The dispositions of battles admit likewise of an infinite variety of cases; for even the difference of ground which happens at almost every step, gives occasion to change the disposition or plan; and a general's experience will teach him to profit by this, and take the advantage the ground offers him. It is an instant, a *coup d'œil* which decides this: for it is to be feared the enemy may deprive you of those advantages or turn them to his own profit; and for that reason this admits of no precise rule, the whole depending on the time and the occasion.

With regard to battles, there are three things to be considered; what precedes, what accompanies, and what follows the action. As to what precedes the action, you should unite all your force, examine the advantage of the ground, the wind, and the sun, (things not to be neglected) and chuse, if possible, a field of battle proportioned to the number of your troops.

You must post the different kinds of troops advantageously for each: they must be so disposed as to be able to return often to the charge; for he who can charge often with fresh troops, is commonly victorious. Your wings must be covered so as not to be surrounded, and you must observe, that your troops can assist each other without any confusion, the intervals being proportioned to the battalions and squadrons.

Great care must be taken about the regulation of the artillery, which should be disposed so as to be able to act in every place to the greatest advantage; for nothing is more certain than that, if the artillery be well commanded, properly distributed, and manfully served, it will greatly contribute to gaining the battle; being looked upon as the general instrument of the army, and the most essential part of military force. The artillery must be well supplied with ammunition, and each soldier have a sufficient number of cartridges. The baggage, provisions, and treasure of the army, should, on the day of battle, be sent to a place of safety.

In battle, where the attacks are, there is also the principal defence. If an army attacks, it forms at pleasure; it makes its points at will: if it defends, it will be sometimes difficult to penetrate into the designs of the enemy, but when once found, succour succeeds to the discovery. Ground and numbers must ever lead in the arrangement of battles; impression and resource will ever bid fairest for winning them.

The most remarkable on record are

B. C.	
1225.	The Theban war of the Seven Heroes against Eteocles.
1184.	Troy taken after ten years siege.
1048.	Jerusalem taken by David from the Jebusites.
750.	War of the Romans against the Sabines
743.	The first Messinian war begins and continues 19 years, to the taking of Ithome.
721.	Samaria taken.
685.	The second Messinian war begins, continues 14 years to the taking of Ira, after 11 years siege.
624	Scythians make war in Asia Minor.
612.	Nineveh destroyed by the Medes.
596.	The war of the Persians against the Scythians, who are expelled by Cyaxeres.
587.	Jerusalem taken by Nebuchadnezzar after a siege of 18 months.
548.	War of Cyrus against Crœsus.
509.	Civil war at Rome, the Tarquins expelled, monarchy abolished, and consuls chosen.
504.	The Athenians take and burn Sardis.
490.	Battle of Marathon.
480.	Thermopylæ. Salamis.
479.	Platea Mycale } Same day Persians defeated at both places.
470.	Cyprus, Persians defeated. Eurymedon Persians defeated.
465.	Third Messinian war begins, continues ten years.
448.	First sacred war concerning the temple of Apollo at Delphi.
439.	War between Corinth and Corcyra.
431.	The Peloponnesian war begins on the 7th of May, lasts 27 years.
409.	Carthage makes war on Sicily.
405.	Battle of Ægospotamos—the usurpation of Dyonisius.
404.	Lysander takes Athens—end of the Peloponnesian war—30 tyrants reign.
401.	Battle of Cunaxa—the younger Cyrus killed—the glorious retreat of the 10,000, and expulsion of the 30 tyrants.
396.	Agesilaus carries the war into Persia.
395.	The Corinthian war—Athens, Corinth, Thebes, Argos, against Lacedæmon.
394,	Battle of Cnidus—Lacedæmonians under Pisander defeated by Conon. A few days after Agesilaus defeats the allies at Choronea.
390.	Battle of Attia—Rome taken by the Gauls.
387.	War against Cyprus—ends in two years.
371.	Leuctra, battle of—Epaminondas, general of Thebes, defeats the Lacedæmonians.
363.	Mantinea battle gained by Epaminondas.

B. C.

360. Methone, the first victory of Philip of Macedon over the Athenians.
357. Second sacred war, on the temple being attacked by the Phoceans, ends in 9 years.
340. Battle of Agrigentum—Timoleon defeats the Carthaginians.
338. Battle of Cheronea.
335. Thebes destroyed by Alexander the Great, when he left only Pindar the poet's house standing.
334. Battle of Granicus—Alexander.
333. Issus.
331. Arbella.
301. Ipous—Antigonus defeated.
312. Tuscan war commenced.
278. Battle at Delphi. Gauls under Brennus cut to pieces.
264. First Punic war lasts 23 years.
262. Sardis, Antiochus Soter defeated there by Eumenes.
256. Regulus defeated by Xanthippus.
234. Sardinian war continues 3 years.
222. Battle of Sellasia.
218 Second Punic war begins, lasts 17 years.
217. Battle of Thrasymene.
216. Cannæ.
208. Mantinea.
202. Zama.
197. Cynocephale—Philip defeated.
168. Pydna. This battle closed the Macedonian empire.
149. Third Punic war.
146. Carthage destroyed by the Romans.
111. Jugurthine war begins, continues 5 years.
105. Battle on the Rhine, the Tuetones defeat 80,000 Romans.
102. Tuetones defeated by C. Marius at Aquæ Sextia.
91. Social war begins, continues three years, finished by Sylla.
89. Mithridatic war begins, continues 26 years.
88. Wars of Marius and Sylla, last six years.
73. War of the Slaves under Spartacus, lasts two years, ended by Pompey and Crassus.
54. England invaded by Julius Cæsar.
48. Battle of Pharsalia.
45. Munda.
43. Mutina.
42. Philippi. Death of Brutus.
31. Actium. Death of the Republic; beginning of the Empire.

A. D.

10. Varus the Roman general, defeated in Germany.
70. Jerusalem destroyed by Titus, August 31.
73. Byzantium taken by the Romans.
196. Byzantium destroyed by Severus.
269. The Goths conquered by Claudius, who massacres 300,000 of them.
340. Battle of Aquileia, Constantine the younger defeated and killed by Constans.

A. D.

405. Battle of Fesulæ, Stilicho defeats 200,000 Goths.
410. Rome taken and plundered by the Goths
440. England ravaged by the Picts and Scots.
455. Rome taken and plundered by the Vandals.
547. Rome re-taken by the Goths.
553. Rome re-conquered by the Emperor.
613. Jerusalem pillaged by the Persians, and 90,000 inhabitants killed.
622. Carthage destroyed by the Saracens.
637. Jerusalem taken by the Saracens.
640. Egypt conquered by the Saracens.
787. Danes, their first descent upon England, at Portland.
895 The Danes under Rollo, make their first descent on France.
1016. Battle of Ashdown, between Canute and Edmund.
1017. Danes under Canute conquer England.
1041. Danes expelled from England.
1066. England invaded by the Normans.
1066. Battle of Hastings, where Harold was slain, and William the Norman became king of England.
1074. The last Danish invasion of England, when they were bribed to depart.
1095. First Crusade—Jerusalem taken and re-taken.
1100. Jerusalem taken by Robert, duke of Normandy.
1147. Second Crusade.
1187. Jerusalem finally conquered by Saladin.
1189. Third Crusade—Siege of Acre.
1192. Battle of Ascalon, in Palestine.
1203. Fourth Crusade.
1204. Constantinople taken by the Latins.
1205. Zenghis Khan, till his death in 1227, gains various battles in Asia.
1215. Prussia subdued by the Mercian Knights.
1214. Battle of Bovines, 25 July.
1217. Lincoln, 19 May.
1218. The Fifth Crusade.
1219. Prussia revolted to Poland.
1261. Constantinople recovered by the Greeks
1064. Battle of Lewis, 14 May.
1265. Evesham, 4 Aug.
1314. Bannockburn, 25 June.
1333. Halydown-Hill, 19 July.
1346. Cressy, 26 Aug.
Battle of Durham, when David, king of Scots, was taken prisoner, 17 Oct.
1347. Calais taken by the English, August 4.
1356. Battle of Poictiers, when the Fr. king and his son were taken prisoners, 19 Sept.

A. D.
1357. John, king of France, taken prisoner by Edward the Black Prince, brought to England, and ransomed for 3,000,000 crowns, but being unable to pay this sum, he returned to England, and died in prison 1364.
1370. Timour (vulgarly called Tamerlane) appears a warrior, and conquers Asia, reigns 35 years.
1388. Battle of Otterburn, between Hotspur and earl Douglas, 31 July.
1403. Battle of Shrewsbury, 12 July.
1415. Agincourt, 25 Oct.
1421. Beaugé, 3 April.
1423. Crevaut, June.
1424. Ferneuil, 27 Aug.
1429. Herrings, 12 Feb.
1453. Mahomed II. takes Constantinople, and begins the Turkish Empire in Europe, which put an end to the eastern empire.
Same year, the wars of the two Roses in England commence.
1455. Battle of St. Alban's, 22 May.
1459. Blackheath, 23 Sept.
1460. Northampton, 10 July.
Wakefield, 24 Dec.
1461. Tourton, 29 March.
1464. Hexham, 15 May.
1469. Banbury, 26 July.
1470. Stamford, March.
1471. Barnet, 14 April.
Tewkesbury, 4 May.
1485. Bosworth, 22 Aug.
1487. Stoke, 6 June.
1494. Formonte, 6 July.
1497. Blackheath, 22 June.
1513. Battle of Flouden, 9 Sept. when James IV. king of Scots, was killed.
1515. Battle of Marignano, Francis I. gains victory, 14—15—25 Sept.
1516. Egypt conquered by the Turks.
1525 Battle of Pavia, Francis I. loses all but honor, 24 Feb.
1542. Battle of Solway, 24 Nov.
1547. Pinkey, 20 Sept.
1557. St. Quintin, 10 Aug.
1558. Calais retaken by the French, January 10.
1596. Cadiz, in Spain, taken by the English.
1632. Battle of Lutzen, Gustavus Adolphus, killed.
1641. Naseby, June.
1642. Edgehill, 24 Oct.
1643. Shatton, 16 May.
Lansdown, 5 July.
Roundawaydown, 13th July.
Newbury, 20 Sept.
1644. Indians, in New England, at war amongst themselves.
1644. Battle of Marston-moor, 2 July.
1650. Dunbar, 3 Sept.
1651. Worcester, 3 Sept.
1658. Ostend attempted to be taken by the French, but they were defeated with great loss.

A. D.
1658. Dunkirk taken by the English, June 24.
1662. Battle of Steinkirk.
1675. Providence, the town of, in Rhode Island, almost destroyed by Indians.
1675. Medfield, town of, in Massachusetts, about half-burnt by the Indians, Feb
1676. Northampton, and several other towns in Massachusetts, burnt and plundered by the Indians, March.
1679. Battle of Bothwell-bridge, 22 June.
1686. Buda taken from the Turks by the Imperialists.
1690. Battle of Staffarda, Catenat defeats the duke of Savoy.
Port Royal, in Nova Scotia, taken by the Massachusetts forces.
Battle of Boyne, Ireland, 1 July.
Casco fort, New Hampshire, taken by the French and Indians.
1691. York-town, in the province of Maine, burnt and plundered by the Indians, Jan. 25.
Battle of Aughrim, Ireland, 22d July.
1700. Port Royal, in Nova Scotia, retaken by the French.
1703. Deerfield in Massachusetts, burnt, and the inhabitants carried off by the French and Indians, as prisoners, February.
1704. Battle of Blenheim, 13 Aug.
1705. Cassano, passage of the Adda, by prince Eugene.
1706. Battle of Turin, prince Eugene defeats the French.
Ramillies, on Whitsunday.
Charleston, South Carolina, invaded by the French, who were repulsed with loss.
1708. Battle of Oudenard, 30 June.
Wynendale, 28 Sept.
1709. Malplaquet, Eugene defeats Villeroy.
Blarignies, 14 Sept.
Pultowa, Charles XII. defeated.
Canada unsuccessfully attacked by the New-Yorkers.
1710. Port Royal, in Nova Scotia, re-taken by the English, when it received the name of Annapolis.
1711. Canada attacked by the British troops and those of New England.
1712. Indian war in North Carolina.
1715. Battle of Dumblain, 12 Nov.
1717. Indians instigated by a Jesuit to make incursions upon the colony of Massachusetts.
1734. Dantzic taken by the Swedes.
1743. Dettingen, the battle of, won by the English and allies, in favour of the queen of Hungary, 26th June.
1744. Battle of Fontenoy, 30 Apr.

A. D.
1745. Louisburgh taken by the Massachusetts forces, June 17.
Battle of Preston-pans, 21 Sept.
1746. Falkirk, 17 Jan.
Culloden, 16 Apr
Madras taken from the English.
1747. Laffeldt, 20 July.
1749. Louisburg given up to the French.
1755. Fort Du Quesne, (now Pittsburgh) battle of, July 9.
1756. Oswego taken by the English.
Grenada, the island of, taken by Admiral Rodney, Feb.
Battle of Lobositz, 1 Oct.
1757. Battle of Rosbach, 5 Nov.
Reichenberg, 21 April.
Gros Jegerndorff, 30 Aug.
Breslau, 22 Nov.
Lissa, 5 Dec.
Hastenbeck, 26 July.
Kolin, 13 June.
Prague, 6 May.
1758. Fort Du Quesne (Pittsburg) taken by General Forbes.
Hanover desolated by the French.
Louisburgh re-taken, July 22.
Dresden taken by the Prussians.
Battle of Sandershausen, 23 July.
Crevelt, 23 June.
Meer, 5 Aug.
Zorndorff, 25 Aug.
Sandershagen, 10 Oct.
Munden, 11 Oct.
Hochkirken, 14 Oct.
1759. Kunersdorf, 12 Aug.
Niagara taken by the English, July 24
Ticonderoga taken by the English.
Quebec taken by the English. September 13.
Canada taken by the English, September 13.
Arcot, Carnatic, taken by the English from the Hindoos.
Frankfort upon the Oder, the Prussians and Russians, 20,000 men on field of battle.
Dresden taken by the Imperialists.
Crown Point taken from the English.
Battle of Bergen, 13 April.
Zullichau, 23 July.
Coefeld, 1 Aug.
Minden, 1 Aug.
Torgau, 8 Sept.
Pretsch, 29 Oct.
Plains of Abraham. 13 Sept. Wolf killed.
Maxen, 20 and 21 Nov.
1760. Montreal taken by the English.
Battle of Cosdorff, 20 Feb.
Quebec, 28 April.
Grabensteyn, 4 June.
Corbach, 24 June.
Emsdorff, 9 July.
Warburg, 31 July.
Strehlen, 2 Aug.
Leignitz, 15 Aug.
Torgau, 2 Nov.

A. D.
1760. Dresden taken by the Prussians again.
Chamblee taken from the French by the British, Sept. 7.
1761. Cherokee Indians in Carolina, defeated by the Americans under Col. Grant.
Dominica taken by the English.
Battle of Langensaltz, 15 Feb.
Grümberg, 21 March.
Vellinghausen, 16 July.
Kirkdenckern, 15 July.
Einbeck, 24 Aug.
1762. Dobeln, 12 May.
Wilhelmstahl, 24 June.
Fulda 23 July.
Friedberg, 30 Aug.
Freyberg. 10 and 29 Oct.
1773. Dantzic taken by the Prussians.
1774. Fort William and Mary, in New-Hampshire, seized by the inhabitants, who possessed themselves of a quantity of powder and military stores, Dec. 14.
1775. Cedars, fort at the, given up to the British by Major Rutherfield, March 15.
Engagement at Concord and Lexington. The grenadiers and light infantry of the British army at Boston, under colonel Smith, 10th foot, and Major Pitcairn, detached to destroy the magazines at Concord, 20 miles from Boston, 18—19 April.
Another detachment march under earl Percy, of 16 companies of infantry and a corps of marines, 19 April.
At Lexington, 15 miles from Boston, fell in with the continentals about five in the morning. The British fire on them and a skirmish is continued to Concord; the British are forced to retreat to Boston, driven before the Americans like sheep; the British lost 114 killed, and 127 wounded, beside 52 missing: the Americans had 62 men killed and wounded; about the third recovered of their wounds.
Ticonderoga taken by Ethan Allen, "in the name of Great Jehovah and the continental Congress," containing 120 pieces of iron ordnance, between 6 and 24 pounders, 50 swivels, 2 ten inch mortars, 1 howitzer, 1 cohorn, 10 tons of leaden ball, 3 carts laden with flints, 30 new field carriages, a quantity of shells, 100 stand of small arms, 10 casks gun-powder, 2 pieces of brass artillery, 3 May.
Crown Point taken by the Americans, May 14.
Bunker's-hill, the British began the attack about noon; the British lost 1440 men killed, 857

A. D.

1775. wounded; among the killed were 26 commissioned officers, and 81 among the wounded. The Americans had 452 men killed, 301 wounded and missing; among the killed was the gallant Dr. Warren, who commanded the American forces. The American fire was conducted with great judgment; and the British were blockaded in Boston, 17 June.

Charlestown, Massachusetts, burnt by the British, June 17.

Stonington, Connecticut, set on fire by the British, Sept. 3.

Canada invaded by the American forces, October.

Chamblee taken by the Americans commanded by Col. Brown and Major Livingston, October 18.

Falmouth, New England, destroyed by the British forces, October 18.

Chamblee fort, in Canada, attacked by the Americans, Oct. 20.

Chamblee taken by Montgomery, 124 barrels gun-powder, 6564 musket cartridges, 150 stand French made arms, 3 mortars, 61 shells, 83 stand English arms; and other valuable military and naval stores, 3 Nov.

Montreal taken by the Americans, Nov. 12.

St. John's taken by Montgomery, 17 brass ordnance, 2 eight inch howitzers, 22 iron ordnance, shot, shells, powder, 800 stand small arms, and naval stores, 13 Nov.

Storm of Quebec, Montgomery falls, Arnold wounded, the Americans obliged to retreat, but encamp on the Plains of Abraham, 31 Dec.

Great Bridge in Virginia, battle of, in which the British were defeated, Dec.

1776. Norfolk, in Virginia, burnt by order of Lord Dunmore the British governor, and great damage sustained, Jan. 1.

Chamblee fort retaken by the British, Jan 18.

Highlanders, and regulators of N. Carolina, defeated with great loss near Moore's Creek bridge, by Gen. Moore, Feb. 27.

Dorchester Point fortified in the night, so as to render Boston no longer tenable by the British, March 4.

Boston evacuated precipitately, the British leaving behind their arms, military stores and provisions; sir Archibald Campbell, with 1700 men, enters the harbor, and are made prisoners by general Washington, 18 March.

A. D.

1776. Crown Point re-taken by the British.

British attack on the Cedars, Arnold capitulates; Americans treated with barbarity; congress annuls the capitulation in consequence, 26 May.

British tories defeated at Moore's creek, in North Carolina, by colonel Caswell, and the tory leader Macleod killed.

Portsmouth, Virginia, destroyed by the British, June 1.

General sir H. Clinton attacks Sullivan's island, in concert with Sir P. Parker, and is defeated by general Lee, 15 June.

Montreal retaken by the British, June 15.

Charleston, S. C. attacked by a squadron of ships under Sir Peter Parker, and a body of troops under Generals Clinton and Cornwallis, who were defeated with great slaughter, June 25.

Battle of Long Island, or Flat bush; the American lines attacked by sir William Howe, with 20,000 men, and the American army suffers great loss from an injudicious disposition of the forces; the retreat however was conducted with admirable skill, in thirteen hours 9000 men with artillery, and all their equipage, crossed an arm of the sea a mile wide, in the face of a superior and victorious army. In this action the Americans had 2000 men killed and wounded, and 1000 taken prisoners. 26 Aug.

Fort on Sullivan's Island, unsuccessfully attacked by the British, June 28.

New-York surrendered to the British forces, Sept. 15.

General Arnold opposes the force sent by Carleton from Canada against Ticonderoga, but is defeated on Lake Champlain; he makes an admirable retreat to Crown point, 11 Oct.

Battle of White Plains; generals Knyphausen, Cornwallis, and Percy, commanded columns; Howe commander in chief of the British, with 15,000 effectives; general Washington commander in chief of the American army, consisting of 5000 regulars, and 11,000 militia; the British attack the American entrenchments but are defeated, 28 Oct.

Fort Washington, near King's Bridge, taken by the British, with a loss of 1000 men! 15 Nov.

Fort Lee, near New-York, taken by the British, Nov. 18.

A. D.

1776. Newport, R. Island, taken by the British, Dec. 7.

General Washington surprises the Hessians at Trenton; general William Irvine commanding the advance; general Cadwallader, the second column, and general Washington the principal division, general Greene and general Sullivan formed his suite; the enemy and their artillery were captured, 26 Dec.

Strength of British and American armies in 1776.

	British.	Americans.
Aug.	24000	16000
Nov.	26900	4500
Dec.	27000	3300

1777. Princetown, battle of, when the Americans under General Washington, defeated the British with great loss, Jan. 2.

Providence, the island of, taken by Commodore Hopkins, March.

Danbury, town of, in Connecticut, burnt by the British, and large quantities of continental stores destroyed, April 26.

Ticonderoga taken by the British, 5 July.

Action at Hubberton, the British general Frazer attacks the retreating Americans under colonel Francis, and defeats them, 6 July.

Fairfield, in Connecticut, burnt by the British, July 7.

Bennington battle, 16 Aug.

General Stark defeats the Hessian general Baum, and colonel Breyman, on Walloon Creek, 16 Aug.

Fort Stanwix, alias Fort Schuyler, the siege of, raised by Sir John Johnson and Lieut. Col. St. Leger, Aug. 22.

Eutaw Springs, the battle of, in which General Green defeats the British, Sept. 8.

Battle of Brandywine; the dispositions of the British were masterly in this action; the American army discomfitted and make a precipitate but circuitous retreat, 11 Sept.

Massacre at the Paoli, by sir Charles Grey, 20 Sept.

Philadelphia taken by the British under General Howe, Sept. 26.

Battle of Germantown; 800 English, 900 Americans killed and wounded; the British lost general Agnew and colonel Bird; the Americans, colonel Haslet, of Delaware state, a gallant officer, 4 Oct.

Battle of Stillwater, about 600 men killed on each side; no victory; the action as intrepid as any known for the numbers; Burgoyne retreats and entrenches himself at Saratoga, 17 September.

British entrenchments near Lake George attacked by general Gates, and the British completely beaten; the British general Frazer, and the Hessian colonel Breyman killed; Arnold who commanded on the right, was wounded in the tendon Achilles; Gates took 200 prisoners and 9 brass field pieces. Burgoyne makes a precipitate retreat to Saratoga, where he capitulates on the 17th of October, surrendering 5790 men, and 35 pieces of field artillery, &c. 17 Oct.

Esopus, in New-York, was totally destroyed by the British, with great quantities of stores, October 15.

Kingston, in Ulster county, New-York, burnt by the British, October 15.

Action at Red Bank, the Hessian general Donop killed, and the British attack frustrated, and the ship of war Augusta blown up, 22 Oct.

Forts Montgomery and Clinton taken by the British, October.

Martha's Island, pillaged by the British, who carried off 300 oxen, and 2000 sheep.

Attack of Mud Fort, (now Fort Mifflin) by Cornwallis; gallantly defended by Col. Samuel Smith, 15 Nov.

Strength of British and American armies in 1777.

	British.	Americans.
March,	27000	4500
June,	30000	8000

1778. Battle of Savannah, 15 Jan.

Monmouth, the British retreat by forced marches to New York, 28 June.

Wyoming, out of 417 Americans stationed there, 360 were inhumanly butchered by a party of Tories and Indians, commanded by Col. John Butler, July 1.

Dominica taken by the French under the Marquis de Bouille, when 164 pieces of cannon and 24 brass mortars were found therein, Sept. 7.

Attack of Savannah, 28 Dec.

1779. Sunbury taken by Gen. Provost, Jan. 9.

Briars creek, American general Ashe defeated, 3 March.

Portsmouth, in Virginia, invaded again by the British, under Sir George Collier and General Mathews, who burnt vast quantities of property there, May 10.

Stoney Point and Verplanks taken by the British under general Vaughan, 30 May.

A. D.

1779. Stonoferry, in Carolina, the battle of, June 20.

Grenada taken by the French, July 6.

Norwalk, in Connecticut, burnt by the British, July 7.

General Wayne storms and takes Stony Point, 16 July.

Pawlus-hook taken by the Americans under General Lee, when 30 of the British were killed, and 160 made prisoners, July 19.

A conflagrating war carried into Connecticut, by governor Tryon and general Garth, New Haven taken; Fairfield, Norwalk, and Greenfield burnt to the ground, July.

Newhaven, town of, ravaged by the British, July.

General Lincoln attacks the British under colonel Maitland, 27 June.

Attack of the British lines at Savannah, by Lincoln and D'Estaign, who are repulsed and raise the siege, 9 Oct.

Fort of Omoa, key to the Bay of Honduras, taken by the British from the Spaniards, Oct. 20.

1780. Fort on Sullivan's Island taken by the British, May 6.

Wachaws, North Carolina, where Colonel Tarleton surprised 300 Americans, of whom he killed by far the greatest number, May.

Charleston, South Carolina, taken by the British, after a siege of several weeks, by Gen. Clinton, 12 May.

Elizabethtown, New-Jersey, taken by the British, June 7.

Springfield attacked and burnt by the British from New York; the British severely handled and forced to retire, 23 June.

General Sumpter, after three repulses storms and takes the British post at Rocky Mount, on the Catawba river; but abandons it and attacks the post at Hanging Rock, 30 July.

Battle of Camden, Gates against Cornwallis, both armies set out at midnight, and their advanced guards began the action at 2 o'clock in the morning, 16 Aug.

Tarleton attacks Sumpter on the Wateree, a skirmish without any other effect than the display of enterprise and intrepidity on both sides, 18 Aug.

Augusta, Georgia, attacked by American general Clark, without success, 14 Sept.

Tarleton attacks Sumpter at Black Rock, on the Tyger river, and is defeated; both commanders severely wounded, Oct.

Battle of King's Mountain, in which a party of American mounted riflemen collected from Kentucky, Georgia, and the Carolinas, attack and kill the tory leader Ferguson, and take 800 of his party prisoners, 7 Oct.

Clermont, S. C taken by Colonel Washington, Dec. 4.

1781. Richmond, in Virginia, destroyed by the British under General Arnold, Jan. 5.

Hillsborough, in Carolina, the royal standard erected there by Lord Cornwallis, Feb. 20.

Colonel Henry Lee, with his legion, attacks a body of tories upon the Haw river, within a mile of Tarleton's encampment, and cuts them to pieces, 25 Feb.

Battle of Guilford court house; general Greene commanded the Americans; general Cornwallis the British; a hard fought battle, the Americans defeated, but the victory was fatal to the victors, 15 March.

Fort Watson, South Carolina, taken by the Americans, April 15.

Camden, battle at, in South Carolina, between General Green and Lord Rawdon, when the Americans retreated, April 25.

Petersburgh, in Virginia, the shipping and stores destroyed at, by Phillips and Arnold, April 26.

Fort Motte, in South Carolina, taken by the Americans, May 12.

Camden, S. C. burnt by the British, May 13.

Fort Granby, in South Carolina, taken by the Americans, May 15.

Fort Cornwallis, at Augusta, taken by the Americans under Gen. Marion and Col. Lee, June 5.

Augusta, Georgia, taken by Col. Pickens and Lee, 5 June.

Battle of the Cowpens, general Morgan defeats Tarleton, whose whole force is cut to pieces; the British had 600 men killed on the field; the Americans 12 killed and 60 wounded. 7 June.

Battle of Ninety-six. 19 June.

Grotton, in Connecticut, burnt by Gen. Arnold, Sept. 6.

Battle of Hobkirks hill, general Greene and lord Rawdon, 8 Sept.

Eutaw Springs, the British under general Stewart, defeated by general Greene; the standard of the 3d British regiment, or old Buffs, taken by the Americans; the American colonel Washington wounded and taken by the British, 8 Sept.

New London, Connecticut, burnt by Benedict Arnold, Sept. 13.

Battles of Porto Novo and Mooteapollam, E. Indies.

1782. Floating batteries, the, destroyed before Gibraltar, Sept. 13.

A. D.

1782. Surrender of Yorktown, by Cornwallis, with his whole army, consisting of 7000 men, to the united armies of America and France, under the command of general Washington, which closed the battles of the American revolution, 17 Oct.

Mohawk river, battle at, when Colonel Willet defeated the British, Oct. 24.

1790. The Miami Indians defeat General Harmar with great loss, September 30.

1791. The Indians defeat Gen. St. Clair with great loss, Nov. 4.

Bangalore, battle of, Cornwallis captures the place.

1792. Ostend taken possession of by the French under Dumourier, Dec.

Nice taken by the French under General Anselm, Sept. 29.

Savoy, part of the king of Sardinia's dominions, taken by the French under General Montesquieu, Oct.

Battle of Jemappe, Dumourier, French 40,000, Clairfayt, Austrians 28,000, Nov. 5.

Frankfort treacherously given up to the Austrians, when 1300 Frenchmen were massacred by the Hessians, and several whose lives were spared had their hands cut off, Dec. 2.

1793. Neuingen, the battle of, between the combined armies and General Dumourier, when the French were defeated with great loss, March 20.

Battle of Tirlemont, Clairfayt defeats Dumourier, March 18.

Battle of St. Amand, in which Dampierre the French commander was killed by a cannon ball, in an engagement near the woods of Rhemes and Vicoigne, when the allies were defeated with great loss; General Clairfayt and Duke of York commanded the coalesced army, May 8.

Famars, battle of, between the French and combined powers, when the former were defeated, by Cobourg and Duke of York, May 23.

Carlberg, the battle of, when the French under Custine, defeated the Prussians, May 18.

Arlon, French and Austrians, latter defeated, 9 June.

Valenciennes, taken by the combined powers, and soon after retaken, June.

Marseilles, which had revolted against the convention, subdued Aug. 24.

Verdun, the French garrison, taken by the Prussians, and retaken soon after, Sept. 2.

A. D.

1793. Battle of Weissemberg, (or attack and repulse of,) Aug. 27.

Battle of Hondschoote, French under Houchard commander, Marshal Freytag taken, duke of York escapes, Sept. 6.

Dunkirk besieged by the combined army under the Duke of York, August 25, who were repulsed with great slaughter, Sept. 7, following.

Battle of Dunkirk, Duke of York and Marshal Freytag defeated by the French under Houchard and Jourdan, 32 24-pounders, and 68 other pieces of cannon taken by the French, Sept. 8.

Battle of Pirmasens, on the Rhine, Duke of Brunswick victorious over the French.

Battle of Saorgia, King of Sardinia beaten, Sept. 20.

Spaniards defeated at Perpignan under Ricardos.

Boufflers, from 8 in the morning to 7 at night, Austrians retreat under cover of night.

Battle of Maubege, Cobourg Austrian, Jourdan French, lasted two days, from day light 'till night.

Jeremie fort, St. Domingo, taken by the British, Oct.

Limbach, battle of, when the French were victorious, Sept. 14.

Maubeuge, the battle of, between the Austrians and the French, when the former were defeated with great loss, Oct. 15 & 16.

Toulon surrendered to the English Admiral Lord Hood, who took possession of the town and shipping in the name of Louis XVII. when the tree of liberty, which had been erected there, was converted into a gibbet for the republicans. On December 19, following, the republicans attacked the town in a most vigorous manner; when the combined forces, finding that all future resistance was useless, after having set fire to the shipping, arsenals, &c. made a precipitate retreat.

Tirlemont, battle of, when after a contest of several days, the French under Dumourier were defeated.

Battle of Deuxponts, Hoche and Wurmser, Hoche victorious at 4 o'clock, afternoon, loss of Austrians 6000, French 2000, 21 Nov.

Hagenau, Hoche gains a victory, 8—9 Dec.

Action five days at Weissemberg, and Austrians driven from Balberotte, 31 Dec.

A. D.

1794. Noimoutier, the island of, taken from the Insurgents of La Vendee, by the arms of the French Republic, Jan 3.

Battle between Russians and Poles, former defeated, 4 Jan.

Fort Vauban taken by the French, Jan. 7.

Battle of Villers en Couchée, 24 April.

Battle of Cateau.

Moucron, battle of, when the allied forces under Clairfayt were totally defeated by the French under Pichegru, April 26.

Courtray, the same, 11 May.

Tournay, battle of, between the French and English, when the former were defeated, May 10; again between the French and combined powers, when the latter were defeated with great loss, May 17 & 18 following.

Lannoy, Pichegru defeats duke of York, 18 May, takes 60 pieces; here the duke won the race, but lost the battle.

Turcoing, Pichegru and Clairfayt, a victory on neither side, though a desperate battle, 22 May

Coilloure, the Spanish garrison of, also Port Vendre, Fort St. Elmo, &c. with 8000 prisoners, taken by the French under Gen. Dugoumier, May.

Battle of Espierres, 25 May.

Hoogleden, Macdonald defeats Clairfayt, 13 June.

Charleroy, a garrison consisting of 3000 Austrians, surrendered to the French under Gen. Jourdan, June 25.

Battle of Fleurus, Jourdan victorious over Cobourg, began at 3 o'clock in the morning; the French three times fell back from the powerful artillery of the Austrians, and returned fresh to the fight. The French word of battle was, *no retreat to day*, for 9 hours victory indecisive; when Jourdan collecting his corps de reserve, Lefebvre leading the cavalry, the Austrians were put to the route. In this action reconnoitering with balloons was practised with the greatest effect, the combined forces lost about 8000 men killed and 15000 prisoners, June 28. In consequence of of this victory, Le Chateau de Namur soon after submitted to the French republic.

Battle of Bellegarde, in the Eastern Pyrennees, Spaniards defeated, French general Mirabel, killed, 13 July.

Fontarabia, the key of Spain, was taken by the French, July.

A. D.

1794. Chandernagore taken from the French by the British, July.

Indians defeated by Gen Wayne, Aug. 20.

Juliers, the fortress of, submitted to the French, when all the provinces west of the Rhine fell into their hands.

Boxtel, Moreau pursues duke of York, 14, 15, 16, Sept.

Bellegarde taken after an action, the last place possessed by the coalesced powers in France, 18 Sept.

Battle of Warsaw, between the Russians and Poles, in which Kosciusko was taken prisoner covered with wounds, 10 Oct.

Battle of Rerzese, in Poland, in which Suwarrow annihilated the Poles, took all their artillery, 19 Oct.

Berterzel, Moreau, beats the Duke of York; general Fox wins a race here, 19 Oct.

Praga, the suburb of, near Warsaw in Poland, taken by the Russian General Suwarrow, who gave the barbarous orders to his army to give quarters to no one, in consequence of which, upwards of 30,000 Poles, men, women and children, were massacred, Nov. 4

Nimeguen, port of, evacuated by the British, Nov. 7.

Warsaw, the capital of Poland, taken by the Russians under Suwarrow, Nov. 9.

Maestrecht, the garrison of, consisting of 8000 Austrians, surrendered to the French, Nov. 9.

Battle of the Black Mountain, Eastern Pyrennees, in which Dugomier, commander of the French, gained a complete victory, but fell in the battle; took 50 pieces of cannon and the Spanish founderies of Egui and Orbaycette, 17 Nov.

Another battle, French took tents for 50,000 men, at Figueras, 20 Nov.

Graves, the fortress of, taken by the French, Dec. 30.

1795. Battle of Bonnel, in Holland, French under Moreau, took 120 pieces of cannon, 7 Jan.

Grenada, bloody battle fought between the French and English in that island, in which the latter were defeated, March 3.

Battle of Quiberoon, Puissaye defeated by Hoche, 3 Aug.

1796. Battle of Kreutsnach, in which the French general Moreau, defeats the Austrian generals Kray and Wurmser, 4 Jan.

Bonaparte's first campaign in Italy,

A. D.

1796. Montenotte, Bonaparte with 56,000 men, defeats Boileau with 84,000, took from the Austrians 40 pieces of cannon, 11 April.

Battle of Fonubio, 7 May.

Pavia, 17 May.

Milessimo, 11 May.

Dego, the same, 14 April.

Battle of Mondovi, in which the French general Stengel was killed. 22 April.

Battle of Lodi, over Boileau, 11 May.

Passage of the Mincio and battle of Borghetta, 4 June.

Battle of Renchen, Moreau victorious over the Austrians, 28 June.

Battle of Etingen, the corps of Condé cut to pieces, 1 July.

Battle of Neukirchen, Lefebvre defeats the Austrians, 6 July.

Battle of Castiglione lasted five days, Wurmser defeated, 70 field pieces, 15,000 prisoners, and killed 6000, 2 Aug.

Battle of Peschiera, 6 Aug.

Roveredo, 6 Sept.

Bassano, 8 Sept.

Castellaro, 14 Sept.

Legonaro, 11 Oct.

Caldiero, 12 Oct.

Arcole, 15 Oct.

Altenkirken, Jourdan dedefeats Wurmser, 1 June.

Moreau attacks Wurmser and defeats him at Frankenthal, 15 June.

Moreau defeats the Austrians at Nordlingen, 10 Aug.

Jourdan defeated and retreats from Frankfort towards the Rhine, 30 Aug. to 3 Sept.

Desaix defeats the Austrians at Marienburg and covers Moreau's retreat, 7 Sept.

1797. Battle near Laforma on the Adige, 13 Jan.

Provera beaten and made prisoner at La Favorita, 15 Jan.

Passage of Tagliamento and defeat of the Archduke near Gradisca; who narrowly escapes, 16 Feb.

Battle of Tagliamento, Austrians under arch duke Charles, defeated by Massena, 16 March.

Battle of Neuwied, Hoche defeats the Austrians under Kray, and takes 4000 prisoners, 18 March.

Battle of Tarvis in the Noric Alps, Massena defeats the Austrians, 20 March.

Battle of Lavis, Joubert defeats the Austrians, 22 March.

Battle of Pufero, Austrians defeated by general Guyeux, 23 March.

Battle of Tarvis, fought above the clouds, Austrians defeated by Massena, the imperial cuirassiers annihilated, 25 March.

D. A.

1797. Battle of the defiles of Neumark, Massena defeats the Austrians, 2 April.

1798. General Berthier, enters and occupies the city of Rome, in consequence of the assassination of general Duphot, and an attempt to assassinate Joseph Bonaparte the French ambassador, 10 Feb.

General Brune takes possession of Fribourg in Switzerland, after a severe action, 3 March.

A revolt in Ireland, several actions between the Irish and British troops with various success, during this month, April.

Action at Killalla, 19 April.

Action at Hacketstown, between the Irish insurgents and British troops; same day actions in Clare, Lucan, Lusk, and Kilcullen, 25 May.

Action at Tarragh, very desperate and bloody; same day the insurgents in Wexford, capture a British detachment, 27 May.

Battle at Enniscorthy, Ireland; same day a desperate action near Limerick, 28 May.

Battle of Arklow, the Irish insurgents defeat the British regulars, 29 May.

Battle of Vinegar Hill, the British under general Fawcett, defeated, 30 May.

Action at Newtownbarry; the British compelled to retreat before the insurgents; the pike the chief weapon of the Irish, 1 June.

The insurgents from Wexford, defeat the British under colonel Walpole, the colonel is killed, and the cannon are taken by the insurgents, 4 June.

Desperate action at New Ross, county Wexford; the British army under general Johnson, severely cut up, their cannon taken, and lord Mountjoy killed. Several actions during this month in which the British are defeated, 5 June.

Battle of Antrim, lord O'Neil killed, with a pike, 7 June.

Battle of Ballinahinch, the British army severely handled by the insurgent general Munroe, who was wounded and taken prisoner and afterwards executed; the British in vengeance burned the town of Saintfield, 12 June.

Insurgents camp at Vinegar hill, stormed by general Lake, and carried with great slaughter, 21 June.

Sir Charles Asgill, defeated by a body of insurgents, under the command of Murphy, an Irish priest, 23 June.

A. D.

1798. Sir Charles Asgill, attacks the Irish insurgents on Kilconnel Hill, and defeats them, but with the loss of 1000 men; the Insurgents lose as many with all their cannon, and their leader Murphy falls in battle, 26 June.

Several actions in this month between the revolted Irish and British troops, July.

A French army under general Humbert, lands in Ireland, and takes possession of Kilalla, 22 Aug.

Humbert attacks Lake at Castlebar, and defeats him, taking six pieces of British artillery, 27 Aug.

Battle of Underwalden in Swisserland, between the adherents of the aristocracy of Berne and the French, under Schauenburg; the town of Stantz was burnt to the ground, 9 Sept.

The Irish insurgents defeat a British force at Rathfarnham, 18 Oct

Desperate action at Kilcock, the British troops suffer from the pike, 28 Oct.

General Mack commences hostilities in Italy against the French, by an attack on five different points of the French lines, in the Roman territory, 22 Nov.

Battle of Porto Fermo, on the Adriatic, the French defeat the Neapolitans and take their cannon and baggage, 28 Nov.

Macdonald defeats the Neapolitans at Civita Castellano, 5 Dec.

Again defeats Mack at Calvi, 8 Dec.

Championnet defeats Mack in a general action, 11 Dec.

Macdonald defeats the Neapolitans under Dumas. The fruit of these battles, was 12,000 prisoners, 99 pieces of cannon, 21 standards, 3000 horses, and all the baggage of the Neapolitan armies.

Egypt conquered by the French.

1799. Battle of El Arish, Bonaparte defeats the Mamalukes, 9 Feb.

Jaffa taken by storm, by generals Lasnes and Bonaparte, 5 March.

Battle of Sadaseer, near Periptnam first action on the invasion of Mysore, 5 March.

Battle of Luciensteig, Massena forces that place with dreadful slaughter; and thus gains the key of Tyrol and the Grisons, 7 March.

Battle at Loubi, on the river Jordan, near Nazareth; Bonaparte, Murat, and Junot commanded, 8 March.

Kleber defeats the Syrians at Led-Jarra, 10 March.

A. D.

1799. Battle of Esdrelon, near Mount Tabor, 17 March.

General Desolles scales the Julian Alps, takes the intrenched defiles of Tauffers in the rear, and gains a complete victory over Laudohn, 17 March.

Ostrach, Jourdan with 40,000 men, is attacked by the archduke with 80,000, and is forced to retreat, 21 March.

Samanhout, a new and elegant disposition, infantry squares formed the two flanks, cavalry in a square the centre; the troops to oppose were Mamalukes and horsemen. Davoust commanded the French horse, Friant and Belliard the two squares of infantry, 22 March. Several battles at Biramba, Bardis, Girgé, gained by Desaix in this month.

Stockach, Jourdan attacks Archduke, but is defeated and forced to retreat; Jourdan's force under 40,000 men, the Archduke's above 80,000; the battle was principally fought by infantry and was terrible; 10,000 men lay on the field of battle, 25 March.

Scherer and Moreau attack the Austrians between the Garda and Adige, gain a hard earned victory, fought from day break to 11 at night, 26 March.

Scherer and Moreau attack general Kray before Verona, and are defeated, 30 March

Battle of Magnan, the French are defeated, 5 April.

Battle Malanelly, E Indies, 5 April.

Lacourbe defeats Bellegarde in the Engadine, 1 May.

Seringapatam taken by storm, Tippoo put to death, partition of Mysore followed, 4 May.

Attack of St. Jean d'Acre, and Bonaparte forced to raise the siege, 7 May.

Moreau defeats the Russians on the Po, 12 May.

Lecourbe defeats the Austrians on the Reuss, 2 June.

Battle of Zurich, the Austrian Generals Hotze, and Wallis, Kerpen and Hillier wounded; and Oudinot and Humbert of the French, 5 June.

Battle of Modena, Macdonald defeats Hohenzollern, 10 June.

Battle of the Trebia, at St. Juliano, Moreau and Suwarrow; the French defeated, 18 June.

Battle of Chebrisa, Bonaparte against the Mamelukes; a new disposition, echellons of squares with artillery and baggage of each square in its centre—and giving a front and flank fire.

Turks land and take Aboukir after

A. D.

1799. a battle very desperate, the Turks defeated, Bonaparte embarks for France, 15 July.

Battle of the Pyramids, the same order of battle—very decided victory over Murad Bey, 21 July.

Second battle of Zurich, most terrible and brilliant, Massena attacks the Archduke; indecisive, 14 Aug.

Suwarrow attacks Joubert at Novi, who is killed; Moreau takes the command but is forced to retreat, a bloody battle, 15 Aug.

Helder, 27 Aug.

Battle of Bergen, in Holland, general Brune attacks Abercrombie, 10 Sept.

Second battle, the British and Russians under the Duke of York, defeated by Brune, and forced to retire within intrenchments, 19 Sept.

Third battle of Zurich, terrible and decisive, one of the most brilliant in history; Massena commanded, the Austrian general Hotze killed, the French triumph, 7 to 24 Sept.

Battle of Fossano, 14 Sept.

Gaeta, Aquila taken by storm, Mack defeated, and the Neapolitans capitulate to Championnet, 1 Oct.

Battle of Berghen, 1 Oct.

Sand. hills near Bergen, 2 Oct.

Battle of Egmont, duke of York again defeated and capitulates, 6 Oct.

Battle of Fossano, French defeated by Melas, 4 Nov.

1800. Egypt conquered by the English.

Moreau crosses the Rhine, and defeats the Austrians at Engen, 2 May.

Battle of Grembach, same, 3 May.

Biberach, same effect, 9 May.

Severe action at Memmingen, Kray forced to retreat, 11 May.

Signal defeat of five Austrian columns, by two French on the Iller, 5 June.

Battle of Hochstedt, the Austrians defeated by Moreau, 18 June

Action at Unberhausen, 26 June.

Celebrated battle at Hohenlinden, gained by Moreau, takes 80 pieces of cannon and 10,000 prisoners; action began at day break and ended at 4 o'clock.

Battle of Casteggio, Austrians defeated by Berthier, 8 June.

Battle of Marengo, one of the most brilliant in history, and important in its consequences; it lasted 11 hours; decided the fate of Italy, and placed the iron crown on the head of the Bonaparte Dynasty, 14 June.

A. D.

1800. Battle at Muhldorf, 1 Dec.

1801. Alexandria, Egypt, Abercrombie fell, French defeated by Hutchinson, 21 March.

1805. Battle of Wertingen in Bavaria, the first of the coalition of Austria and Russia; Austrians defeated and all their cannon taken, Oct. 8.

Battle of Guntzburg, marshal Ney defeats the Austrians, 9 Oct.

Battle on the Adige, Massena forces a passage at Verona, and defeats the archduke Charles, Oct. 18.

Surrender of Ulm by Mack, October 20.

Murat defeats prince Ferdinand at Nuremburg, Oct. 21.

Battle of Caldiero, Massena attacks the whole Austrian line, defeats them; captures one of their divisions; the arch duke escapes at night, Oct. 30.

Battle of Amstetten, the Russians defeated by Murat, 4 Nov

Battle of Marienzel, Davoust defeats the Austrian General Meerfeldt, 8 Nov.

Mortier defeats the Russians under Kutasoff at Diernstein, Nov 11.

Murat and Lasnes defeats the Russians under Kutasoff at Holabrunn, 15 Nov.

Soult again at Guntersdorff, 16 Nov.

Battle of Austerlitz or of the three emperors, 500 pieces of cannon and 150,000 men were engaged in this battle, which was one of the most profound in the history of tactics, and the most brilliant in the annals of victory; 150 pieces of artillery were taken by the victors; this battle deprived the house of Austria of the title of Emperor of Germany, 2 Dec.

1806. Battle of Jena, Oct. 14.

Prussia subdued by Bonaparte.

1807. Dantzick taken, May 20.

Battle of Spandau, June 5.

Lonutten, same day.

Deppen, battle of, Marshal Ney makes a fictious retreat, and cuts a body of Russians to pieces, June 6.

Eylau, battle of, very bloody and desperate, Russians lost 30,000 men killed. June 6—12.

Friedland, battle of, this action decided the fate of the Coalition, and produced the peace of Tilsit on the 7th July succeeding.—This battle stands in the same rank with Jemappe, Fleurus, Nordlingen, Zurich, Marengo, Jena and Austerlitz.

BATTLE-*Array*, } the method and or-
Line of BATTLE, } der of arrangi
the troops in order or line of battle: form of drawing up the army for a

gagement. This method generally consists of three lines, viz. the front line, the rear line, and the reserve

The second line should be about 300 paces behind the first, and the reserve at about 5 or 600 paces behind the second. The artillery is likewise divided along the front of the first line. The front line should be stronger than the rear line, that its shock may be more violent, and that, by having a greater front, it may more easily close on the enemy's flanks. If the first line has the advantage, it should continue to act, and attack the enemy's second line, terrified by the defeat of their first. The artillery must always accompany the line of battle in the order it was at first distributed, if the ground permit it; and the rest of the army should follow the motions of the first line, when it continues to march on after its first success.

BATTLE-*Ax*, an offensive weapon, formerly much used by the Danes, and other northern infantry. It was a kind of halbert, and did great execution when wielded by a strong arm.

Main-BATTLE. See BATTLE-*Array*.

BATTLEMENTS, in military affairs, are the indentures in the tops of old castles or fortified walls, or other buildings, in the form of embrasures, for the greater conveniency of firing or looking through.

BATTRE *l'estrade*, Fr. to send out scouts.

BATTRE *la campagne*, Fr. to scour the country or make incursions against an enemy.

BATTRE, *Fr* to direct one or more pieces of ordnance in such a manner, that any given object may be destroyed or broken into by the continued discharge of cannon ball, or of other warlike materials; it likewise means to silence an enemy's fire.

BATTRE *de front*, Fr. to throw cannon-shot in a perpendicular or almost perpendicular direction against any body or place which becomes an object of attack. This mode of attack is less effectual than any other unless you *batter in breach*.

BATTRE *de'écharpe*, Fr. to direct shot, so that the lines of fire make a manifest acute angle with respect to the line of any particular object against which cannon is discharged.

BATTRE *en flanc*, Fr. is when the shot from a battery runs along the length of the front of any object or place against which it is directed.

BATTRE *a dos*, Fr. to direct the shot from one or several pieces of cannon so as to batter, almost perpendicularly, from behind any body of troops, part of a rampart or intrenchment.

BATTRE *de revers*, Fr. to direct shot, in such a manner as to run between the two last mentioned lines of fire. When you batter from behind, the shot fall almost perpendicularly upon the reverse of the parapet. When you batter from the reverse side, the trajectories or lines of fire describe acute angles of forty five degrees or under, with the prolongation of that reverse.

BATTRE *de bricole*, Fr. This method can only be put in practice at sieges, and against works which have been constructed in front of others that are invested. A good billiard player will readily comprehend what is meant by the *bricole* or back stroke; it means simply the firing of shot against a wall so that the balls may rebound and in the rebound strike men or objects, that could not be struck directly.

BATTRE *la Caisse*, Fr. to beat a drum.

Mener battant, to overcome.

Mener quelqu'un au Tambour battant. To overcome by strokes of the drum. To disconcert, to confound, puzzle and perplex any body.

BAVINS, in military affairs, implies small faggots, made of brush-wood, of a considerable length, no part of the brush being taken off. See FASCINES.

BAYARD, *Fr.* a provincial term used in ancient Languedoc and Roussillon to signify a wheel-barrow.

BAYONET, a kind of triangular dagger, made with a hollow handle, and a shoulder, to fix on the muzzle of a firelock or musket, so that neither the charging nor firing is prevented by its being fixed on the piece. It is of infinite service against horse. At first the bayonet was screwed into the muzzle of the barrel, consequently could not be used during the fire. It is said by some to have been invented by the people of Malacca, and first made use of on quitting the pikes. According to others, it was first used by the fusileers in France, and invented or used at Bayonne. At present it is given to all infantry.

BEACON, a signal for securing and guarding against dangers.

On certain eminent places of the country are placed long poles erect, whereon are fastened pitch-barrels to be fired by night, and smoke made by day, to give notice, in a few hours of an approaching invasion; the Irish are reported to have risen upon and extirpated the Danes by beacons or fires lighted on their hills.

BEAR, in gunnery. A piece of ordnance is said to *bear*, or *come* to *bear*, or *brought* to *bear* when pointed directly against the object; that is, pointed to hit the object.

BEARD, the reflected points of the head of an ancient arrow, particularly of such as were jagged.

BEAT, in a military sense, signifies to gain the day, to win the battle, &c.

To BEAT *a parley*. See CHAMADE.

BEAVER, that part of the ancient helmet which covered the face, and which was moveable so as to expose the face without removing the beaver from the helmet.

BECHE, *Fr.* a spade used by pioneers.

BEDS, in the military language, are of various sorts, viz.

Mortar-BEDS serve for the same purpose as a carriage does to a cannon: they are made of solid timber, consisting generally of 2 pieces fastened together with strong iron bolts and bars. Their sizes are according to the kind of mortar they carry.

BEDS *for Mortars.*

KINDS.		Weight.			Tonnage.			Len		Br.		Ht.	
		cwt.	qr.	lb	tn.	cwt.	qr.	ft.	in.	ft.	in.	ft.	in.
13	Sea	38	3	10	3	3	2						
	Land Wood	21	2	[illegible]	1	6	0	7	0	2	6	2	3
	Do. Iron	50	0	0	2	10	0	6	3	3	1	1	8
10	Sea	32	2	4	2	2	2						
	Land Wood	10	0	20	0	14	2	6	6	1	8	1	10
	Do Iron	23	0	0	1	3	0	4	8	2	4	1	1½
8	Land Wood	6	0	20	0	7	2	4	2	1	7	1	7½
	Do. Iron	12	0	0	0	12	0	4	0	1	11	0	11
5 1-2	Wood	1	0	22	0	2	0	2	9	1	4	0	10
4 2-5	Wood	0	3	11	0	1	2	2	4½	1	2	0	9

Stool-BEDS for guns.

										Inch.		In
42 Prs.	0	1	20	0	1	0	2	10	11	to	8¾	3¾
32 —	0	1	14	0	1	0	2	10	10		5¼	3¼
24 —	0	1	14	0	1	0	2	9	10¼		6½	4
18 —	0	1	12	0	1	0	2	8	9½		6½	3¾
12 —	0	1	10	0	0	2⅜	2	8	10		6½	4
9 —	0	1	4	0	0	2	2	7	9½		5¾	3½
6 —	0	1	0	0	0	1½	2	6	9		4¾	3½
4 —	0	1	0	0	0	1	2	6	8¼		5¼	

Sea-Mortar-BEDS, are made of solid timber, having a hole in the centre to receive the pintle or strong iron bolt, about which the bed turns. Sea-mortars are mounted on these beds, on board of the bomb-ketches.

These beds are placed upon very strong timber frames, fixed into the bomb-ketch, in which the pintle is fixed, so as the bed may turn about it, to fire any way. The fore part of these beds is an arc of a circle described from the same centre as the pintle-hole.

Stool-BED, is a piece of wood on which the breech of a gun rests upon a truck-carriage, with another piece fixed to it at the hind end, that rests upon the body of the hind axle-tree; and the fore part is supported by an iron bolt. See CARRIAGE.

BEEF-*Eaters*, the yeomen of the guard to the king of Great Britain are so called, being kept up rather for pageantry, than for any military service Their arms are a sabre and lance; and the dress of the 13th century.

BEETLES, in a military sense, are large wooden hammers for driving down pallisades, and for other uses, &c.

BEETLESTOCK, the stock or handle of a beetle.

BELLIGERENT, in a state of warfare. Hence any two or more nations at war are called belligerent powers.

BELTS, in the army are of different sorts, and for various purposes, viz.

Sword-BELT, a leathern strap in which a sword hangs.

Shoulder-BELT, a leathern belt, which goes over the shoulder, and to which the pouch is fixed. It is made of stout leather. See POUCH.

Shoulder-BELTS for the light cavalry and dragoons, 2½ inches broad. Regiments that have buff waistcoats, usually have buff-coloured accoutrements, and those which have white waistcoats, wear white.

Waist-BELTS, are 1¾ inches; to have buckles or clasps.

BELTS are known among the ancient and middle-age writers by divers names, as *zona*, *cingulum*, *reminiculum*, *ringa*, and *baldrellus*. The *belt* was an essential piece of the ancient armor, insomuch that we sometimes find it used to denote the whole armor. In latter ages the *belt* was given to a person when he was raised to knighthood: whence it has also been used as a badge or mark of the knightly order.

BELTS among the aborigines of America, are the symbols of peace or war; they are made in a rude fanciful taste, of colored beads, and are usually presented at all conferences or talks.

BENDINGS, in military and sea matters, are ropes, wood, &c. bent for several purposes. M. Amontons gives several experiments concerning the *bending* of ropes. The friction of a rope *bent*, or wound round an immovable cylinder, is sufficient, with a very small power, to sustain very great weights. Divers methods have been contrived for *bending* timber, in order to supply crooked planks and pieces for building ships; such as by sand, boiling water, steam of boiling water, and by fire. See M. Du Hamel, in his book called *Du Transport, de la Conservation, & de la Force des Bois.* M. Delesme ingeniously enough proposed to have the young trees bent, while growing in the forest. The method of *bending* planks by sand-heat, now used in the British navy yards, was invented by captain Cumberland.

A method has been lately invented and practised for *bending* pieces of timber, so as to make the wheels of carriages without joints. The *bending* of boards, and other pieces of timber for curved works in joinery, is effected by holding them to the fire, then giving them the figure required, and keeping them in this figure by tools for the purpose.

BENEFICIARII, in ancient military history, denotes soldiers who attend the chief officers of the army, being exempted from all other duty. In the American service called *waiters*; each commissioned officer being allowed one.

Beneficiarii were also soldiers discharged from the military service or duty, and provided with *beneficia* to subsist on.

BERM, in fortification, is a little space or path, of about 3, 4, 6, or 8 feet broad, according to the height and breadth of the works, between the ditch and the parapet, when made of turf, to prevent the earth from rolling into the ditch; and serves likewise to pass and repass.

To **BESIEGE**, to lay siege to or invest any place with armed forces.

BESIEGERS, the army that lays siege to a fortified place.

BESIEGED, the garrison that defends the place against the army that lays siege to it. See Siege.

To **BETRAY**, to deliver perfidiously any place or body of troops into the hands of the enemy. To discover that which has been entrusted to secrecy.

BETTY, a machine used for forcing open gates or doors. See Petard.

BICOQUE, *Fr.* a term used in France to signify a place ill-fortified and incapable of much defence It is derived from a place on the road between Lodi and Milan, which was originally a gentleman's country house surrounded by ditches. In the year 1522, a body of Imperial troops were stationed in it, and stood the attack of the whole French army, during the reign of Francis I. This engagement was called the battle of *Bicoque*.

BILBO, a rapier, or small sword, was formerly so called: from Bilboa in Spain, where excellent swords are made.

BILL or Bill-Hook, a small hatchet used for cutting wood for fascines, gabions, bavins, &c.

BILLET, in England is a ticket for quartering soldiers, which intitles each soldier, by act of parliament, to candles, vinegar, and salt, with the use of fire, and the necessary utensils for dressing and eating their meat. The allowance of small beer has been added by a late regulation.

BILLET *de logement*, *Fr.* a billet for quarters. This billet or ticket was formerly delivered out to the French troops upon the same general principles that it is issued in England.

Billeting, in the army, implies the quartering soldiers in the houses of any town or village.

BINACLE, a telescope with 2 tubes, so constructed, that a distant object might be seen with both eyes, now rarely used.

BIVOUAC, Biouac, Biouvac, or Biovac, *Fr.* [from the German *bey-wacht*, a double watch or guard.] A night-guard, or a detachment of the whole army, which during a siege, or in the presence of an enemy, marches out every night in squadrons or battalions to line the circumvallations, or to take post in front of the camp, for the purpose of securing their quarters, preventing surprises, and of obstructing supplies. When an army does not encamp, but lies under arms all night, it is said to *bivoac*. Thus before the battle of Austerlitz, Bonaparte was all night in *bivoac*, or with the advanced guard.

BIT, the bridle of a horse, which acts by the assistance of a curb. See Curb and Bridon.

BLACK-HOLE, a place of confinement for soldiers, in the English discipline, who may be confined therein by the commanding officer, but not by any inferior officer. In this place they are generally restricted to bread and water.

BLANKETS, are made of coarse paper steeped in a solution of saltpetre, and when dry are again dipt in a composition of tallow, resin, and sulphur. They are used only in fire-ships.

BLAST, and **BLASTING**. See Mine and Mining.

BLINDS, in military affairs, are wooden frames, composed of 4 pieces, either flat or round, two of which are 6 feet long, and the others 3 or 4 feet, which serve as spars to fasten the two first together: the longest are pointed at both ends, and the two others are fastened towards the extremities of the former, at about 10 or 12 inches from their points, the whole forming a rectangular parallelogram, the long sides of which project beyond the other about 10 or 12 inches. Their use is to fix them either upright, or in a vertical position, against the sides of the trenches or saps, to sustain the earth. Their points at the bottom serve to fix them in the earth, and those at top to hold the fascines that are placed upon them; so that the sap or trench is formed into a kind of covered gallery, to secure the troops from stones and grenades.

The term *Blind* is also used to express a kind of hurdle, made of the branches of trees, behind which the soldiers, miners, or labourers, may carry on their work without being seen. See Hurdle.

Blinds are sometimes only canvas stretched to obstruct the sight of the enemy Sometimes they are planks set up, for which see Mantlet. Sometimes they are made of a kind of coarse basket-work; see Gabions. Sometimes of barrels, or sacks filled with earth. In short, they signify any thing that covers the labourers from the enemy.

Blind See Orillon and Fortification.

BLOCKADE, } in military affairs,
BLOCKADING, } implies the surrounding a place with different bodies of

troops, who shut up all the avenues on every side, and prevent every thing from going in or out of the place; this is usually effected by means of the cavalry. The design of the blockade is to oblige those who are shut up in the town, to consume all their provisions, and by that means to compel them to surrender for want of subsistence.

Hence it appears that a blockade must last a long time, when a place is well provided with necessaries; for which reason this method of reducing a town is seldom taken, but when there is reason to believe the magazines are unprovided, or sometimes when the nature or situation of the place permits not the approaches to be made, which are necessary to attack it in the usual way

Maritime towns, which have a port, are in much the same case as other towns, when their port can be blocked up, and the besiegers are masters of the sea, and can prevent succours from being conveyed that way into the place.

To **Blockade**, or to block up a place, is to shut up all the avenues, so that it cannot receive any relief either of men or provisions, &c.

To raise a **Blockade**, is to march from before a place, and leave it free and open as before.

To turn a siege into a **Blockade**, is to desist from a regular method of besieging, and to surround the place with those troops who had formed the siege.

To form a **Blockade**, is to surround the place with troops, and hinder any thing from going in or coming out.

A new species of **Blockade** has been discovered during the French Revolution, a blockade by *proclamation*

BLOCUS, *Fr.* See *Blockade.*

BLOCK *battery*, in gunnery, a wooden battery for two or more small pieces, mounted on wheels, and moveable from place to place: very ready to fire *en barbet*, in the galleries and casemates, &c. where room is wanted.

Block-*house*, in the military art, a kind of wooden fort or fortification, sometimes mounted on rollers, or on a flat-bottomed vessel, serving either on the lakes or rivers, or in counter-scarps and counter-approaches. This name is sometimes given to a brick or stone building on a bridge, or the brink of a river, serving not only for its defence, but for the command of the river, both above and below.

BLUNDERBUSS, a well known fire-arm, consisting of a wide, short, but very large bore, capable of holding a number of musquet or pistol balls, very fit for doing great execution in a croud, making good a narrow passage, defending the door of a house, stair-case, &c. or repelling an attempt to board a ship.

BOARD *of Ordnance.* *See Ordnance.*

Board, also implies an office under the government, where the affairs of some departments are transacted; of which there are several sorts in England.

BOAT. See *Advice-Boat*, *Pontoon-Boat*, &c.

BODY, in the art of war, is a number of forces, horse or foot, united and marching under one commander.

Main **Body** *of an army*, sometimes means the troops encamped in the center between the two wings, and generally consists of infantry. The main body on a march, signifies the whole of the army, exclusive of the van and rear-guard.

Body *of a Reserve.* See *Reserve.*

Body *of a place*, is, generally speaking, the buildings in a fortified town; yet the inclosure round them is generally understood by it.

BOIS *de remontage*, Fr. every species of timber which is used to new mount cannon, or refit ammunition waggons, &c.

Bois *de chauffage*, Fr. the fuel which is distributed among French troops.

BOLT, an iron pin used for strengthening a piece of timber, or for fastening two or more articles together. Bolts in gunnery, being of several sorts, admit of various denominations, which arise from the specific application of them, as

1. *Eye*
2. *Joint*
3. *Transom*
4. *Bed*
5. *Breeching*
6. *Bracket*
7. *Stool-bed*
8. *Garnish*
9. *Axle-tree*
10. *Bolster*

} **Bolts.**

BOMB { See **Shell.**
Chest. See **Caisson.**
Vessels, } small vessels,
Ketches, } made very strong

with large beams, particularly calculated for throwing shells into a town, castle, or fortification, from 13 and 10-inch mortars; two of which are placed on board of each ship. They are said to have been invented by M. Reyneau, a Frenchman, and to have been first put in action at the bombardment of Algiers in 1681: till then it had been judged impracticable to bombard a place from the sea.

Bomb *Ketch.* The old bomb-ketches carried one 13-inch and 1 10-inch mortar; with 8 six-pounders, besides swivels, for their own immediate defence. The modern bomb-vessels carry 2 10-inch mortars 4 68-pounders, and 6 18-pounders carronades; and the mortars may be fired at as low an angle as 20 degrees; though these mortars are not intended to be used at sea but on very particular occasions; their principal intention, at these low angles, being to cover the landing of troops, and protect coasts and harbours. A bomb-ketch is generally from 60 to 70 feet long from stern to stern, and draws 8 or 9 feet water. The tender is generally a brig, on board of which the party of artillery remain, till their services are required on board the bomb-vessel.

Instructions for their Management and Security in Action.

1. A Dutch pump, filled with water, must be placed in each round-top, one upon the forecastle, one on the main-deck, and one on the quarter-deck; and furnished with leather buckets, for a fresh supply of water.

2. The booms must be wetted by the pumps before the tarpaulins and mortar-hatches are taken off; and a wooden skreen, 5 feet square, is to be hung under the booms, over each mortar, to receive the fire from the vents.

3. The embrasures being fixed and properly secured, the port must be let down low enough to be covered by the sole of the embrasure. Previous to its being let down, a spar must be lashed across it, to which the tackles for raising it again must be fixed; this spar serves to project the tackles clear of the explosion.

4. The mortars must not be fired through the embrasures at a lower angle than 20 degrees, nor with a greater charge than 5 lbs. of powder.

5. Previous to firing, the doors of the bulkhead, under the quarter-deck, must be shut, to prevent the cabin being injured by the explosion.

6. The bed must be wedged in the circular curb, as soon as the mortar is pointed, to prevent re-action; the first wedge being driven tight, before the rear ones are fixed, in order to give the full bearing on the table, as well as the rear of the bed. The holes for dog-bolts must be corked up, to prevent the sparks falling into them.

7. When any shells are to be used on board the bomb, they must be fixed on board the tender, and brought from thence in boxes in her long-boat; and kept along side the bomb-ship till wanted, carefully covered up.

8. In the old constructed bomb-vessels it was necessary to hoist out the booms, and raft them along side previous to firing; but in these new ones, with embrasures, only the boats need be hoisted out; after which the mortars may be prepared for action in 10 minutes.

Proportion of Ordnance and Ammunition for a Bomb Ship, carrying two 10 inch Mortars, to fire at low angles, and at 45 degrees, four 68 Prs. and six 18 Prs. Carronades.

KINDS.	*In the Bomb Ship.*	*Tender*	*Total.*
Mortars, sea service, with Beds, &c. 10 inch	2	—	2
Quoins for do.—2 for 45° —2 for 20° elevation	4	—	4
Capsquares, with keys, &c. spare - - - -	2	—	2
Handspikes, large - -	4	—	4
Spunges, with ram. heads	4	—	4
Handscrews, small - -	2	—	2
Handcrow levers—6 feet	4	—	4
Handspikes, common	6	—	6
Linstocks, with cocks -	4	—	4
Powder horns, new pat.	4	—	4
Match - cwts.	1	—	1
Marline - - skeins	—	12	12
Budge bar. cop. hooped	1	1	2
Lanthorns, Muscovy	2	2	4
dark - -	2	2	4
Carronades, 68 Prs. -	4	—	4
18 Prs. -	6	—	6
having sliding carriages, elevating screws, spunges, rammers &c. complete			
Gun tackles, complete for traversing mortars, 12 Prs. - -	4	—	4
Wads, 68 Prs. - - -	270	270	540
18 Prs. - - -	480	180	660
Musquets { Bright -	32	—	32
Musquets { Black -	8	—	8
Pistols, pairs - - -	15	—	15
Swords - - - - - -	40	—	40
Pole axes - - - -	6	—	6
Pikes - - - - - -	40	—	40
Musquetoons - - -	2	—	2
Flints, musquet - -	900	—	900
pistol - - -	150	—	150
Ball cartridges, musq.	2000	—	2000
pistol -	2000	—	2000
Shot, musq. cwt. qr. lb.	1.0.0	—	1.0.0
pistol — — —	1.0.0	—	1.0.0
Round car. fixed, 10 in.	48	152	200
Empty shells, 10 inch.	48	352	400
Iron shot, 1 lb. - -	1000	4000	5000
Fixed shells, 10 inch	48	—	48
Case shot, 68 Prs. car.	20	20	40
Emp. sh. 8 in for car.	52	100	152
Shot, round, 68 Prs.	50	50	100
Carcasses do. 68 Prs.	96	104	200
Shot, round, 18 Prs.	300	—	300
Case shot, 18 Prs.	30	30	60
Carcas. do. fix. 18 Prs.	150	150	300
Hand shells, fixed, sea service	—	150	150
Fuzes for do. spare -	—	15	15
Pap. cov. for cart. 10 in.	106	609	715
68 Pr.	293	301	594
18 Pr	258	198	456
Flan. cartridg. emp. for 10 in. mor. } to hold 5 lb.	106	—	106
do. 10. lb.	—	609	609
Flan. cartridg. emp. for 68 Prs. car. } to hold 5 lb.	293	151 }	594
do. 4 lb.	—	150 }	
Flannel cartridges, emp. for 18 Prs. to hold 1½ lbs. -	528	148	676
Paper cartridges for bursting, 10 inches, empty,	—	352	352
Paper cartridges, for bursting, 8 inches, empty -	—	100	100

Proportion of Ordnance, &c. for a Bomb Vessel. (Continued.)	*In the Bomb Ship.*	*Tender.*	*Total.*
Paper cartridges filled with 2 lb. 10oz for 10 inch. - - - - -	48	—	48
Do. filled with 1 lb. 14 oz. for 8 inch	52	—	52
Fuzes, drove, 10 inch.	52	388	440
8 — -	57	110	166
Valenciennes composition: 200 for 10 inch. shells at 14oz. each, lbs.	—	175	175
768 for 10 inch. shells, at 9 oz. each, lbs.	—	42	42
Tube boxes, tin - -	12	—	12
Fuze composition, for priming carcasses, lbs.	—	10	10
Powder bags - - - - -	—	6	6
Portfires - - - - - - -	—	200	200
Quick match, cotton, lbs.	—	20	20
Spirits of wine, gals.	—	4	4
Kitt lbs.	—	80	80
Bottoms of wood, 10 in.	10	40	50
Signal rockets, 1 lb. doz.	—	2	2
Blue lights, do	—	3	3
Gunpowder for the mortars and carronades, half barrels	72	150	222
Powder for priming, do.	—	1	1
bursting, do.	—	28	28
with all the small articles which usually attend mortars on every service, and the articles necessary for the service of carronades at sea.			
Laboratory chests, 4 ft.	—	2	2
3 ft.	—	2	2
Handpumps for wetting the rigging, &c.	6	—	6
Leather buckets - -	24	—	24

Bomb *Tender*, a small vessel of war laden with ammunition for the bomb-ketch, and from which the latter is constantly supplied.

BOMBARD, an ancient piece of ordnance, so called, very short, and very thick, with an uncommon large bore.—There have been bombards which have thrown a ball or shell of 300 weight: they made use of cranes to load them. The Turks use some of them at present.

To **BOMBARD,** } the act of as-
BOMBARDING, } saulting a city
BOMBARDMENT, } or fortress, by
throwing shells into it in order to set fire to and ruin the houses, churches, magazines, &c. and to do other mischief. As one of the effects of the shell results from its weight, it is never discharged as a ball from a cannon, that is, by pointing it at a certain object: but the mortars are fixed at an elevation of or about 45 degrees; that is, inclined so many degrees from the horizon, that the shell describes a curve, called the military projectile: hence a mortar, whose trunnions are placed at the breech, can have no point-blank range. Mortars should be so contrived, that they may be elevated to any degree required, as much preferable to those fixed at an angle of 45°; because shells should never be thrown at that angle but in one single case only, which seldom happens; that is, when the battery is so far off, that they cannot otherwise reach the works: for when shells are thrown from the trenches into the works of a fortification, or from the town into the trenches, they should have as little elevation as possible, in order to roll along, and not bury themselves; whereby the damage they do, and the terror they cause to the troops, is much greater than if they sink into the ground. On the contrary, when shells are thrown upon magazines, or any other buildings, with an intention to destroy them, the mortar should be elevated as high as possible, that the shells may acquire a greater force in their fall.

Shells should be loaded with no more powder than is requisite to burst them into the greatest number of pieces, and the length of the fuzes should be exactly calculated according to the required ranges; for, should the fuze set fire to the powder in the shell, before it falls on the place intended, the shell will burst in the air, and probably do more mischief to those who fired the mortar, than to those against whom it was discharged. To prevent this, the fuzes are divided into as many seconds as the greatest range requires, consequently may be cut to any distance, at an elevation of 45 degrees.

Mortars are not to be fired with two fires; for when the fuze is properly fixed, and both fuze and shell dredged with mealed powder, the blast of the powder in the chamber of the mortar, when inflamed by the tube, will likewise set fire to the fuze fixed in the shell.

BOMBARDIERS, artillery soldiers, who are employed in mortar and howitzer duty. They are to load them on all occasions; and in most services they load the shells and grenades, fix the fuzes, prepare the composition both for fuzes and tubes, and fire both mortars and howitzers on every occasion. In the English service, shells and grenades, composition for the same, fuzes, &c. are prepared in the laboratory by people well-skilled in that business.

In most other armies both officers and soldiers belonging to the companies of bombardiers, have an extraordinary pay, as it requires more mathematical learning to throw shells with some degree of exactness, than is requisite for the rest of the artillery. In the British service a specific number is attached to each company of artillery, and do not form a separate corps as in other countries.

BONAVOGLIE, *Fr.* a man that for

a certain consideration voluntarily engages to row.

BONNET, in fortification, implies a small but useful work, that greatly annoys the enemy in their lodgments. This work consists of two faces, which make a salient angle in the nature of a ravelin, without any ditch, having only a parapet 3 feet high, and 10 or 12 feet broad. They are made at the salient angles of the glacis, outworks, and body of the place, beyond the counterscarp, and in the faussebray. See Fortification.

Bonnet *à Prêtre*, or *Priest's Cap*, in fortification, is an outwork, having three salient and two inward angles, and differs from the double tenaille only in having its sides incline inwards towards the gorge, and those of a double tenaille are parallel to each other. See Fortification.

BORDER, in military drawings, implies single or double lines, or any other ornament, round a drawing, &c.

BOOKS. There are different books made use of in the army, for the specific purposes of general and regimental economy.

The general orderly Book is kept by the brigade major, from which the leading orders of regiments, conveying the parole and countersign, are always taken.

The regimental orderly Book contains the peculiar instructions of corps which are given by a colonel or commanding officer to the adjutant—hence *adjutant's orderly* Book—and from him to the serjeant-major, who delivers the same to the different serjeants of companies assembled in the orderly room for that purpose—hence the *company's orderly* Book.

The regimental Book is kept by the clerk of the regiment, and contains all the records, &c. belonging to the corps.

The Company Book, is kept by the commanding officer of every company; and contains returns of all incidents and payments.

The black Book is a sort of memorandum which is kept in every regiment, to describe the character and conduct of non-commissioned officers and soldiers; when and how often they have been reduced or punished, &c.

Every quarter-master belonging to the cavalry and infantry, has likewise a book which may not improperly be called a book or inventory of regimental stores, &c.

Practice Book. Every officer of the artillery ought to have a book in which he should note every useful fact that occurs in practice.

BOOM, in marine fortification, is a long piece of timber, with which rivers or harbors are stopped, to prevent the enemy's coming in: it is sometimes done by a cable or chain, and floated with yards, topmasts, or spars of wood lashed to it.

BORE, in gunnery, implies the cavity of the barrel of a gun, mortar, howitzer, or any other piece of ordnance.

BOSSE, *Fr.* a term used in the French artillery, to express a glass bottle which is very thin, contains four or five pounds of powder, and round the neck of which four or five matches are hung under, after it has been well-corked. A cord, two or three feet in length, is tied to the bottle, which serves to throw it. The instant the bottle breaks, the powder catches fire, and every thing within the immediate effects of the explosion is destroyed.

BOTTES, *Fr.* boots.

Grosses Bottes, *Fr.* jack-boots.

BOTTINE, *Fr.* half-boots worn by the hussars and dragoons in foreign armies.

BOUCHE, *Fr.* means the aperture or mouth of a piece of ordnance, that of a mortar, of the barrel of a musket, and of every species of fire-arms from which a ball or bullet is discharged.

BOUCHES *à feu*, Fr. is generally used to signify pieces of ordnance.

BOULER *la Matiere*, Fr. to stir up the different metals which are used in casting cannon.

BOULETS *à deux têtes*, chain-shot.

BOULEVART, *Fr.* formerly meant a *bastion*. It is no longer used as a military phrase, although it sometimes occurs in the description of works or lines which cover a whole country, and protect it from the incursions of an enemy. Thus Strasburgh and Landau may be called two principal boulevarts or bulwarks, by which France is protected on this side of the Rhine.

The elevated line or rampart which reaches from the Champs Elysées in Paris beyond the spot where the bastille was destroyed in 1789, is stiled the Boulevart.

In ancient times, when the Romans attacked any place, they raised boulevarts near the circumference of the walls. These boulevarts were 80 feet high, 300 feet broad, upon which wooden towers commanding the ramparts were erected covered on all sides with iron-work, and from which the besiegers threw upon the besieged stones, darts, fire-works, &c. to facilitate the approaches of the archers and battering rams.

BOULINER, *Fr.* a French military phrase. *Bouliner dans un camp*, means to steal or pilfer in a camp. *Un soldat boulineur*, signifies a thief.

BOURGUIGNOTE, *Fr.* Is a helmet or morion which is usually worn with a breast-plate. It is proof against pikes and swords.

BOURRELET, *Fr.* the extremity of a piece of ordnance towards its mouth. It is usually cast in the shape of a tulip on account of its aptitude to fit the construction of embrasures. Bourrelet means likewise a pad or collar.

BOURRER, *Fr.* to ram the wad or any other materials into the barrel of a fire-arm.

BOURRIQUET, *Fr.* a basket made use of in mining, to draw up the earth, and to let down whatever may be necessary for the miner.

BOUSSOLE, *Fr.* a compass which every miner must be in possession of to direct him in his work.

BOUTE-SELLE, *Fr.* the signal or word which is given to the cavalry to saddle their horses.

BOUTON, *Fr.* the sight of a musquet.

BOW, an ancient weapon of offence, made of steel, wood, or other elastic matter; which, after being bent by means of a string fastened to its two ends, in returning to its natural state, throws out an arrow with prodigious force.

The use of the bow is, without all doubt, of the earliest antiquity. It has likewise been the most universal of all weapons, having obtained amongst the most barbarous and remote people, who had the least communication with the rest of mankind.

The bow is a weapon of offence amongst the inhabitants of Asia, Africa, and America, at this day; and in Europe, before the invention of fire-arms, a part of the infantry was armed with bows. Lewis XII. first abolished the use of them in France, introducing, in their stead, the halbert, pike, and broadsword. The long-bow was formerly in great use in England, and many laws were made to encourage the use of it. The parliament under Henry VII. complained of the disuse of long bows, theretofore the safeguard and defence of that kingdom, and the dread and terror of its enemies.

Cross-**Bow**, is likewise an ancient weapon of offence, of the eleventh century. Philip II. surnamed the Conqueror, introduced cross-bows into France. In this reign Richard I. of England, was killed by a cross-bow at the siege of Chalus.

BOWMAN. See Archer.

BOWYER. The man who made or repaired the military bows was so called.

BOXES, in military affairs, are of several sorts, and for various purposes.

Battery-Boxes. See Battery.

Cartouch-Boxes. See Cartouch.

Nave Boxes, are made of iron or brass, and fastened one at each end of the nave, to prevent the arms of the axle-tree, about which the boxes turn, from causing too much friction.

Tin-Boxes, such as are filled with small shot for grape, according to the size of the gun they are to be fired out of.

Wood-Boxes, with lids, for holding grape-shot, &c. each calibre has its own, distinguished by marks of the calibre on the lid.

Boxes *for Ammunition*. The dimensions of the common ammunition boxes vary according to the ammunition they are made to contain, in order that it may pack tight: this variation, however, is confined to a few inches, and does not exceed the following numbers.

Table of general dimensions of Ammunition Boxes.

	Exterior.						Weight when empty.
	Len		Bre.		Depth.		
	ft.	in.	ft.	in.	ft.	in.	lbs.
From	2	2	0	10	0	8½	20
To	2	9	1	6	1	6	30

Weight when filled, and number contained in each.

Kinds of Ammunition.			Weight of Boxes when filled with Ammunition.			No. of Rounds contained in each Box.
			cwt.	qrs.	lbs.	No.
Boxes for shot fixed with powder.	12Prs.	Round	1	1	10	8
		Case.	0	3	15	6
	6 Prs.	Round	1	2	7	12
		Case.	1	0	15	12
	3 Prs.	Round	0	2	29	16
		Case.	0	2	23	14
Box. for shot fixed to wood bottoms without powder.	24Prs.	Round	1	1	26	6
		Case.	2	0	0	6
	12Prs.	Round	1	2	20	12
		Case.	1	2	22	8
	6 Prs.	Round	1	2	20	24
		Case.	1	1	12	18
	3 Prs.	Round	1	1	0	30
		Case,	1	1	0	30
	How'r Case.	8	1	2	2	3
		5½	1	2	12	10
		4½	1	2	22	20
Boxes for Shells.	How'r Shells. fixed.	8	1	2	2	3
		5½	1	2	12	10
		4½	1	2	22	20

* Shells called four and an half, are really four and two-fifths.

The common ammunition-waggon will hold from 9 to 13 of these boxes in one tier.

The tonnage of ammunition in boxes is equal to its weight: about 12 boxes make one ton.

BOYAU, in fortification, is a particular trench separated from the others, which, in winding about, incloses different spaces of ground, and runs parallel with the works of the place, that it may not be enfiladed. When two attacks are made at once, one near to the other, the boyau makes a communication between the trenches, and serves as a line of contravallation, not only to hinder the sallies of the besieged, but likewise to secure the miners.

BRACES, in a military sense, are a kind of armor for the arm: they were formerly a part of a coat of mail.

BRACKETS, in gunnery, are the cheeks of the travelling carriage of a mortar; they are made of strong wooden planks. This name is also given to that part of a large mortar-bed, where the trunnions are placed, for the elevation of the mortar: they are sometimes made of wood, and more frequently of iron, of almost a semicircular figure, well fastened with nails and strong plates.

BRANCH. See MINE and GALLERY.

BRAND, an ancient term for a sword; so called by the Saxons.

BRAQUER, *Fr.* is improperly used to express the movement of a cannon to any particular side. The correct expression is, to point the cannon, *pointer le canon*.

BRASSARTS, *Fr.* thin plates of beaten iron which were anciently used to cover the arms above the coat of mail.

Brassarts and cuirasses were worn in the days of St. Louis.

BRASSER *la Matiere*, Fr. to mix the different ingredients which are required for the making of gunpowder or other combustible matter.

BREACH, in fortification, a gap, or opening, in any part of the works of a fortified place, made by the artillery or mines of the besiegers, preparatory to the making an assault.

The batteries to make a breach, should commence by marking out as near as possible, the extent of the breach intended to be made; first, by a horizontal line within a fathom of the bottom of the revetement in a dry ditch, and close to the water's edge in a wet one; and then by lines perpendicular to this line, at short distances from each other, as high as the cordon; then, by continuing to deepen all these cuts, the wall will give way in a body. The guns to produce the greatest effect should be fired as near as possible in *salvos* or vollies. The breach should be one third the length of the face, from the centre towards the flanked angle. When the wall has given way, the firing must be continued to make the slope of the breach practicable.

Four 24 pounders from the lodgement in the covert way will effect a breach in 4 or 5 days, which may be made practicable in 3 days more.

Another way of making a breach is by piercing the wall sufficiently to admit two or three miners, who cross the ditch, and make their entry during the night into the wall, where they establish two or three small mines, sufficient to make a breach. See ARTILLERY at Siege; see also BATTERY.

To repair a BREACH, is to stop or fill up the gap with gabions, fascines, &c. and prevent the assault.

To fortify a BREACH, is to render it inaccessible by means of chevaux-de-frize, crow's-feet, &c.

To make a lodgment in the BREACH. After the besieged are driven away, the besiegers secure themselves against any future attack in the breach.

To clear the BREACH, that is, to remove the ruins, that it may be the better defended.

BREAK *off*, a term used when cavalry or infantry are ordered to diminish its front. It is also used to signify wheeling from line; as BREAKING-off to the left, for *wheeling* to the left.

BREAK-*Ground*, the first opening of the earth to form entrenchments, as at the commencement of a siege. It applies also to the striking of tents and quitting the ground on which any troops had been encamped.

To BREAK *ground*, to begin, to open and work at the trenches in a siege, &c.

BREAST PLATE, in military antiquity, a piece of defensive armor worn on the breast of both men and horses. They are but seldom used now

BREAST-*work* See PARAPET.

BREECH *of a gun*, the end near the vent. See CANNON.

BREVET *rank*, is a rank in the army higher than that for which you receive pay; and gives a precedence (when corps are brigaded) to the date of the brevet commission.

BREVET, *Fr.* commission, appointment. Under the old government of France it consisted in letters or appointments signed by the king, by virtue of which every officer was authorised to discharge his particular duty. All officers in the old French service, from a cornet or sub-lieutenant up to a marshal of France were stiled *Officiers à Brévet*.

BREVET *d'Assurance ou de Retenue d'Argent*, Fr. certain military and civil appointments granted by the old kings of France, which were distinguished from other places of trust, in as much as every successor was obliged to pay a certain sum of money to the heirs of the deceased, or for the discharge of his debts. Hence the term *brevet d'Assurance ou de retenue*.

BRICKS, in military architecture, supply the place of stone in common buildings, and are composed of an earthy matter, hardened by art, to a resemblance of that kind: they may be very well considered as artificial stone. The Greeks and Romans, &c. generally used bricks in their buildings, witness the Pantheon, &c. In the east they baked their bricks in the sun. The Romans used them unburnt, having first left them to dry in the air for 3, 4, or 5 years.

The best *bricks* must not be made of any earth that abounds with sand or gravel, nor of such as is gritty or stony; but of a greyish marle, or yellow clay, or at least of reddish earth. But if there is a necessity to use that which is sandy, choice should be made of that which is tough and strong.

The best season for making *bricks* is the spring; because they are subject to crack, when made in the summer: the loam should be well steeped or soaked, and wrought with water. They are shaped in a mould, and, after some drying in the sun or air, are burnt to a hardness. This is our manner of making bricks; but whether they were always made in this manner admits a doubt. We are not clear what was the use of straw in the bricks for building in Egypt, or why in some part of Germany they mix saw-dust in their clay for bricks.

We are in general tied down by custom to one form, and one size; which is truly ridiculous: 8 or 9 inches in length, and 4 in breadth, is the general measure: but beyond doubt there might be other forms, and other sizes, introduced very advantageously.

Compass Bricks, are of a circular form; their use is for steening of walls; we have also concave, and semi-cylindrical, used for different purposes.

Grey-Stocks, are made of the purest earth, and better wrought: they are used in front in building, being the strongest and handsomest of this kind.

Place-Bricks, are made of the same earth, or worse, and being carelessly put out of hand, are therefore weaker and more brittle, and are only used out of sight, and where little stress is laid on them.

Red Stocks, are made of a particular earth, well wrought, and little injured by mixtures: they are used in fine work, and ornaments.

Hedgerly-Bricks, are made of a yellowish colored loam, very hard to the touch, containing a great quantity of sand: their particular excellence is, that they will bear the greatest violence of fire without hurt.

BRICOLE, an improved kind of traces used by the French in drawing and manœuvring artillery; analogous to the old drag rope, but having the addition of a leather strap or girdle with a buckle, to which the drag is affixed; and an iron ring and hook at the end to drag by.

BRIDGES. Manner of laying a pontoon bridge across a river.

The bank on each side, where the ends of the bridge are to be, must be made solid and firm, by means of fascines, or otherwise. One end of the cable must be carried across the river; and being fixed to a picket, or any thing firm, must be drawn tight by means of a capstan, across where the heads of the boats are to be ranged. The boats are then launched, having on board each two men, and the necessary ropes, &c. and are floated *down* the stream, under the cable, to which they are lashed endwise, by the rings and small ropes, at equal distances, and about their own breadth asunder; more or less, according to the strength required. If the river be very rapid, a second cable must be stretched across it, parallel to the first, and at the distance of the length of the boats; and to which the other ends of the boats must be lashed. The spring lines are then lashed diagonally from one boat to the other, to brace them tight; and the anchors, if necessary, carried out, up the stream, and fixed to the cable or sheer line across the river. One of the chesses is then laid on the edge of the bank, at each end of the bridge, bottom up; these serve to lay the ends of the baulks upon, and as a direction for placing them at the proper distances, to fit the chesses that cover the bridge. The baulks should then be laid across the boats, and keyed together: their numbers proportioned to the strength required in the bridge. If the gangboards are laid across the heads and sterns of the boats from one side of the river to the other, they will give the men a footing for doing the rest of the work. Across the baulks are laid the chesses, one after another, the edges to meet; and the baulks running between the cross pieces on the under side of the chesses. The gangboards are then laid across the ends of the chesses on each edge of the bridge.

Precautions for passing a bridge of boats.

Whatever size the bridge may be, infantry should never be allowed to pass at the same time with carriages or cavalry. The carriages should always move at a certain distance behind each other, that the bridge may not be shook, by being overloaded. The horses should not be allowed to trot over the bridge; and the cavalry should dismount and lead their horses over. Large flocks of cattle must not be allowed to cross at once.

For the dimensions, weight, and equipage of a pontoon, see the word *Pontoon*.

When bridges are made to facilitate the communication between different parts of the approaches at a siege, they should, if possible, be placed above the town; or the besieged will take advantage of the current to float down large trees, or other bodies, in order to destroy the bridge. Two of such bridges should always be placed close to each other, in order to prevent the confusion of crossing and recrossing on the same bridge; the one being intended to pass over one way, and the other to return. Pontoon bridges will generally not support a greater weight than 4 or 5,000 pounds. Pontoons, when united as a bridge, will no doubt bear more in proportion, than when acted upon separately: but the weight which a pontoon will bear may be easily ascertained, by loading it with water till it sinks to any required depth, and then by calculating the number of cubic feet of water it contains, ascertain the number of pounds required to sink it to that particular depth.

Bridges, in military affairs, are of several sorts and denominations, viz.

Rush-Bridges, are made of large bundles of rushes, bound fast together, over which planks are laid, and fastened: these are put in marshy places, for an army to pass over on any emergency.

Pendant or *hanging* Bridges, are those

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not supported by posts, pillars, or butments, but hung at large in the air, sustained only at the two ends; as the new bridge at the Falls of Schuylkill, five miles from Philadelphia, 1809.

Draw-Bridge, that which is fastened with hinges at one end only, so that the other may be drawn up (in which case the bridge is almost perpendicular) to hinder the passage of a ditch, &c. There are others made to draw back and hinder the passage; and some that open in the middle; one half of which turns away to one side, and the other half to the other, and both again join at pleasure.

Flying-Bridge, is generally made of two small bridges, laid one over the other, in such a manner that the uppermost stretches, and runs out by the help of certain cords running through pullies placed along the sides of the upper bridge, which push it forwards, till the end of it joins the place it is intended to be fixed on. They are frequently used to surprise works, or out-posts that have but narrow ditches. There is a curious bridge of this kind on the Ohio, worthy of attention.

Bridge *of boats*, is a number of common boats joined parallel to each other, at the distance of 6 feet, till they reach across the river; which being covered with strong planks, and fastened with anchors and ropes, the troops march over.

Bridge *of communication*, is that made over a river, by which two armies, or forts, which are separated by that river, have a free communication with one another.

Floating-Bridge, a bridge made use of in form of a work in fortification called a redoubt; consisting of two boats, covered with planks, which are solidly framed, so as to bear either horse or artillery. Bridges of this kind are frequently used.

Floating bridges made of large logs of light timber bound together with a floor along them are common in the United States.

Ponton-Bridge, a number of tin or copper boats placed at the distance of 7 or 8 feet asunder, each fastened with an anchor, or a strong rope that goes across the river, running through the rings of the pontons. They are covered with baulks, and then with chests or planks, for the army to march over. See Ponton.

Cask, or *Barrel* Bridge, a number of empty casks that support baulks and planks, made as above into a bridge, where pontons, &c. are wanting. Experience has taught us that 5 ton of empty casks will support above water 9000 pounds: hence any calculation may be made.

Bridges are made of carpentry or masonry. The number of arches of a bridge is generally made odd; either that the middle of the stream or chief current may flow freely without interruption of a pier; or that the two halves of the bridge, by gradually rising from the ends to the middle, may there meet in the highest and largest arch; or else, for the sake of grace, that by being open in the middle, the eye in viewing it may look directly through there as we always expect to do in looking at it, and without which opening we generally feel a disappointment in viewing it.

If the bridge be equally high throughout, the arches, being all of a height, are made all of a size, which causes a great saving of centering. If the bridge be higher in the middle than at the ends, let the arches decrease from the middle towards each end, but so that each half have the arches exactly alike, and that they decrease in span proportionally to their height, so as to be always the same kind of figure. Bridges should rather be of few and large arches, than of many and small ones, if the height and situation will allow of it.

Names of all the terms, peculiar to Bridges, &c.

Abutment. See *Butments*.

Arch, an opening of a bridge, through or under which the water, &c. passes, and which is supported by piers or butments. Arches are denominated circular, elliptical, cycloidal, caternarian, equilibrial, gothic, &c. according to their figure or curve.

Archivolt, the curve or line formed by the upper sides of the voussoirs or arch-stones. It is parallel to the intrados or under side of the arch when the voussoirs are all of the same length; otherwise not.

By the archivolt is also sometimes understood the whole set of voussoirs

Banquet, the raised foot-path at the sides of the bridge next the parapet: it is generally raised about a foot above the middle or horse-passage, and 3, 4, 5, 6, or 7, &c. feet broad, according to the size of the bridge, and paved with large stones, whose length is equal to the breadth of the walk.

Battardeau, or *Coffer-dam*, a case of piling, &c. without a bottom, fixed in the river, water-tight or nearly so, by which to lay the bottom dry for a space large enough to build the pier on. When it is fixed, its sides reaching above the level of the water, the water is pumped out of it, or drawn off by engines, &c. till the space be dry; and it is kept so by the same means, until the pier is built up in it, and then the materials of it are drawn up again. Battardeaux are made in various manners, either by a single inclosure, or by a double one, with clay or chalk rammed in between the two, to prevent the water from coming through the sides: and these inclosures are also made either with piles only, driven close by one another, and sometimes notched or dove-tailed into each other, or with piles grooved in the sides, driven in at a distance from one another, and boards let down between them in the grooves.

Butments, are the extremities of a bridge, by which it joins to, or abuts upon, the land, or sides of the river, &c.

These must be made very secure, quite immoveable, and more than barely sufficient to resist the drift of its adjacent arch, so that, if there are not rocks or very solid banks to raise them against, they must be well re-inforced with proper walls or returns, &c.

Caisson, a kind of chest, or flat-bottomed boat, in which a pier is built, then sunk to the bed of the river, and the sides loosened and taken off from the bottom, by a contrivance for that purpose; the bottom of it being left under the pier as a foundation. It is evident, therefore, that the bottoms of the caissons must be made very strong and fit for the foundations of the piers. The caisson is kept afloat till the pier be built to the height of low water mark; and for that purpose, its sides must either be made of more than that height at first, or else gradually raised to it, as it sinks by the weight of the work, so as always to keep its top above water: and therefore the sides must be made very strong, and kept asunder by cross-timbers within, lest the great pressure of the ambient water crush the sides in, and so not only endanger the work, but also drown the workmen within it. The caisson is made of the shape of the pier, but some feet wider on every side to make room for the men to work; the whole of the sides are of two pieces, both joined to the bottom quite round, and to each other at the salient angle, so as to be disengaged from the bottom, and from each other, when the pier is raised to the desired height, and sunk. It is also convenient to have a little sluice made in the bottom, occasionally to open and shut, to sink the caisson and pier sometimes by, before it be finished, to try if it bottom level and rightly; for by opening the sluice, the water will rush in and fill it to the height of the exterior water, and the weight of the work already built will sink it: then by shutting the sluice again, and pumping out the water, it will be made to float again, and the rest of the work may be completed. It must not however be sunk except when the sides are high enough to reach above the surface of the water, otherwise it cannot be raised and laid dry again. Mr. Labelye states, that the caissons in which he built Westminster bridge, London, contained above 150 load of fir timber, of 40 cubic feet each, and were of more tonnage or capacity than a 40 gun ship of war.

Centres, are the timber frames erected in the spaces of the arches to turn them on, by building on them the voussoirs of the arch. As the centre serves as a foundation for the arch to be built on, when the arch is completed, that foundation is struck from under it, to make way for the water and navigation, and then the arch will stand of itself from its curved figure. The centre must be constructed of the exact figure of the intended arch, convex, as the arch is concave, to receive it on as a mould. If the form be circular, the curve is struck from a central point by a radius; if it be elliptical, it should be struck with a double cord, passing over two pins fixed in the focusses, as the mathematicians describe their ellipses; and not by striking different pieces or arcs of circles from several centres; for these will form no ellipsis at all, but an irregular misshapen curve made up of broken pieces of different circular arches; but if the arch be of any other form, the several abscissas and ordinates should be calculated; then their corresponding lengths, transferred to the centering, will give so many points of the curve; by bending a bow of pliable matter, according to those points, the curve may be drawn.

The centres are constructed of beams of timber, firmly pinned and bound together, into one entire compact frame, covered smooth at top with planks or boards to place the voussoirs on; the whole supported by off-sets in the sides of the piers, and by piles driven into the bed of the river, and capable of being raised and depressed by wedges contrived for that purpose, and for taking them down when the arch is completed. They should also be constructed of a strength more than sufficient to bear the weight of the arch.

In taking the centre down, first let it down a little, all in a piece, by easing some of the wedges; then let it rest a few days to try if the arch makes any efforts to fall, or any joints open, or any stones crush or crack, &c. that the damage may be repaired before the centre is entirely removed, which is not to be done till the arch ceases to make any visible efforts.

Chest. See CAISSON.

Coffer-dam. See BATTARDEAU.

Drift, *Shoot*, or *Thrust*, } of an arch, is the push or force which it exerts in the direction of the length of the bridge. This force arises from the perpendicular gravitation of the stones of the arch, which being kept from descending by the form of the arch, and the resistance of the pier, exert their force in a lateral or horizontal direction. This force is computed in *Prop.* 10, of Mr. Hutton's *Principles of Bridges*, where the thickness of the pier is determined that is necessary to resist it, and is greater the lower the arch is, *cæteris paribus*.

Elevation, the orthographic projection of the front of a bridge, on the vertical plane, parallel to its length. This is necessary to shew the form and dimensions of the arches and other parts, as to height and breadth, and therefore has a plain scale annexed to it, to measure the parts by. It also shews the manner of working up and decorating the fronts of the bridge.

Extrados, the exterior curvature or line of an arch. In the propositions of the second section in Professor Hutton's *Principles of Bridges*, it is the outer or upper line of the wall above the arch; but it often means only the upper or exterior curve of the voussoirs.

Foundations, the bottoms of the piers, &c. or the bases on which they are built. These bottoms are always to be made with projections, greater or less, according to the spaces on which they are built: and according to the nature of the ground, depth and velocity of water, &c. the foundations are laid and the piers built after different manners, either in caissons, in battardeaux, on stilts with sterlings, &c. for the particular method of doing which, see each under its respective term.

The most obvious and simple method of laying the foundations and raising the piers up to the water-mark, is to turn the river out of its course above the place of the bridge, into a new channel cut for it near the place where it makes an elbow or turn; then the piers are built on dry ground, and the water turned into its old course again; the new one being securely banked up. This is certainly the best method, when the new channel can be easily and conveniently made.—This, however, is seldom or never the case.

Another method is, to lay only the space of each pier dry till it be built, by surrounding it with piles and planks driven down into the bed of the river, so close together as to exclude the water from coming in; then the water is pumped out of the inclosed space, the pier built in it, and lastly the piles and planks drawn up. This is coffer-dam work, but evidently cannot be practised if the bottom be of a loose consistence, admitting the water to ooze and spring up through it.

When neither the whole nor part of the river can be easily laid dry as above, other methods are to be used; such as to build either in caissons or on stilts, both which methods are described under their proper words; or yet by another method, which hath, though seldom, been sometimes used, without laying the bottom dry, and which is thus; the pier is built upon strong rafts or gratings of timber, well bound together, and buoyed up on the surface of the water by strong cables, fixed to the other floats or machines, till the pier is built; the whole is then gently let down to the bottom, which must be made level for the purpose; but of these methods, that of building in caissons is best.

But before the pier can be built in any manner, the ground at the bottom must be well secured, and made quite good and safe, if it be not so naturally. The space must be bored into, to try the consistence of the ground; and if a good bottom of stone, or firm gravel, clay, &c. be met with, within a moderate depth below the bed of the river, the loose sand, &c. must be removed and digged out to it, and the foundation laid on the firm bottom on a strong grating or base of timber made much broader every way than the pier, that there may be the greater base to press on, to prevent its being sunk; but if a solid bottom cannot be found at a convenient depth to dig to, the space must then be driven full of strong piles, whose tops must be sawed off level some feet below the bed of the water, the sand having been previously dug out for that purpose; and then the foundation on a grating of timber laid on their tops as before: or, when the bottom is not good, if it be made level, and a strong grating of timber, 2, 3, or 4 times as large as the base of the pier be made, it will form a good base to build on, its great size preventing it from sinking. In driving the piles, begin at the middle, and proceed outwards all the way to the borders or margin; the reason of which is, that if the outer ones were driven first, the earth of the inner space would be thereby so jammed together, as not to allow the inner piles to be driven; and besides the piles immediately under the piers, it is also very prudent to drive in a single, double, or triple row of them round, and close to the frame of the foundation, cutting them off a little above it, to secure it from slipping aside out of its place, and to bind the ground under the pier firmer: for, as the safety of the whole bridge depends on the foundation, too much care cannot be used to have the bottom made quite secure.

Jettée, the border made round the stilts under a pier. See STERLING.

Impost, is the part of the pier on which the feet of the arches stand, or from which they spring.

Key-stone, the middle voussoir, or the arch-stone in the top or immediately over the centre of the arch. The length of the key-stone, or thickness of the archivolt at top, is allowed to be about 1-15th or 1-16th of the span, by the best architects.

Orthography, the elevation of a bridge, or front view, as seen at an infinite distance.

Parapet, the breast-wall made on the top of a bridge to prevent passengers from falling over. In good bridges, to build the parapet but a little part of its height close or solid, and upon that a balustrade to above a man's height, has an elegant effect.

Piers, the walls built for the support of the arches, and from which they spring as their bases. They should be built of large blocks of stone, solid throughout, and cramped together with iron, which will make the whole as one solid stone. Their faces or ends, from the base up to high-water-mark, should project sharp out with a salient angle, to divide the stream: or, perhaps the bottom of the pier should be built flat or square up to about half the height of low-water-mark, to allow a lodgement against it for the sand and mud, to go over the foundation; lest, by being kept bare, the water should in time undermine, and so ruin or injure it. The best form of the projection for dividing the stream, is the triangle; and the longer it is, or the more acute the salient angle, the better it will divide it, and the less will the force of the water be against the pier; but it may be sufficient to make that angle a right one, as it will make the work stronger; and in that case the perpendicular projection will be equal to half the breadth or thickness of the pier. In rivers, on which large heavy craft navigate and pass the arches, it may, perhaps, be better to make the ends semicircular: for, although it does not divide the water so well as the triangle, it will both better turn off and bear the shock of the craft.

The thickness of the piers should be such as will make them of weight or strength sufficient to support their interjacent arch independent of any other arches; and then, if the middle of the pier be run up to its full height, the centering may be struck to be used in another arch before the hanches are filled up.—The whole theory of the piers may be seen in the third section of Professor Hutton's *Principles of Bridges*.

They should be made with a broad bottom on the foundation, and gradually diminishing in thickness by off-sets up to low-water-mark.

Piles, are timbers driven into the bed of the river for various purposes, and are either round, square, or flat like planks. They may be of any wood which will not rot under water; but oak and fir are mostly used, especially the latter, on account of its length, straightness, and cheapness. They are shod with a pointed iron at the bottom, the better to penetrate into the ground, and are bound with a strong iron band or ring at top, to prevent them from being split by the violent strokes of the ram by which they are driven down.

Piles are either used to build the foundations on, or they are driven about the pier as a border of defence, or to support the centres on; and in this case, when the centreing is removed, they must either be drawn up, or sawed off very low under water; but it is better to saw them off and leave them sticking in the bottom, lest the drawing of them out should loosen the ground about the foundation of the pier. Those to build on, are either such as are cut off by the bottom of the water, or rather a few feet within the bed of the river; or else such as are cut off at low-water mark, and then they are called stilts. Those to form borders of defence, are rows driven in close by the frame of a foundation, to keep it firm, or else they are to form a case or jettée about the stilts, to keep the stones within it, that are thrown in to fill it up: in this case, the piles are grooved, driven at a little distance from each other, and *plank-piles* let into the grooves between them, and driven down also, till the whole space is surrounded. Besides using this for stilts, it is sometimes necessary to surround a stone pier with a sterling, or jettée, and fill it up with stones to secure an injured pier from being still more damaged, and the whole bridge ruined. The piles to support the centres may also serve as a border of piling to secure the foundation, cutting them off low enough after the centre is removed.

Pile-driver, an engine for driving down the piles. It consists of a large ram or iron sliding perpendicularly down between two guide posts; which being lifted up to the top of them, and there let fall from a great height, comes down upon the top of the pile with a violent blow. It is worked either with men or horses, and either with or without wheel-work The bridge on Schuylkill, Philadelphia, is a master-piece of workmanship; and the new bridge at Trenton, over the Delaware, is equally bold and ingenious in its plan—in the latter the floor is suspended from the voussoirs of the arches, by stirrups of iron

Pitch, of an arch, the perpendicular height from the spring or impost to the key-stone.

Plan, of any part, as of the foundations, or piers, or superstructure, is the orthographic projection of it on a plane parallel to the horizon.

Push, of an arch. See DRIFT.

Salient angle, of a pier, the projection of the end against the stream, to divide itself. The right-lined angle best divides the stream, and the more acute, the better for that purpose; but the right angle is generally used, as making the best masonry. A semicircular end, though it does not divide the stream so well, is sometimes better in large navigable rivers, as it carries the craft the better off, or bears their shocks the better.

Shoot, of an arch. See DRIFT.

Springers, are the first or lowest stones of an arch, being those at its feet, and bearing immediately on the impost.

Sterlings, or *Jettées*, a kind of case made about a pier of stilts, &c to secure it, and is particularly described under the next word, *Stilts*.

Stilts, a set of piles driven into the space intended for the pier, whose tops being sawed level off, above low-water mark, the pier is then raised on them. This method was formerly used when the bottom of the river could not be laid dry; and these stilts were surrounded, at a few feet distance, by a row of piles and planks, &c. close to them like a coffer-dam, and called a *sterling*, or *jettée*; after which loose stones, &c. are thrown or poured down into the space, till it is filled up to the top, by that means forming a kind of pier of rubble of loose work, and which is kept together by the sides or sterlings: this is then paved level at the top, and the arches turned upon it. This method was formerly much used, most of the large old bridges in England being erected that way, such as London bridge, Newcastle bridge, Rochester bridge, &c. But the inconveniences attending it are so great, that it is now quite disused; for, because of the loose composition of the piers, they must be made very large or broad, or else the arch must push them over, and rush down as soon as the centre was drawn; which great breadth of piers and sterlings so much contracts the passage of the water, as not only very much to incommode the navigation through the arch, from the fall and quick motion of the water; but likewise to put the bridge itself in much danger, especially in time of floods, when the water is too much for the passage. Add to this, that besides the danger there is of the pier bursting out the sterlings, they are also subject to much decay and damage by the velocity of the water and the craft passing through the arches.

Thrust. See Drift.

Voussoirs, the stones which immediately form the arch, their undersides constituting the intrados. The middle one, or key-stone, should be about 1-15th or 1-16th of the span, as has been observed; and the rest should increase in size all the way down to the impost: the more they increase the better, as they will the better bear the great weight which rests upon them without being crushed; and also will bind the firmer together. Their joints should also be cut perpendicular to the curve of the intrados. For more information, see Professor Hutton's *Principles of Bridges*, in 8vo.

Bridge, in gunnery, the two pieces of timber which go between the two transoms of a gun-carriage, on which the coins are placed, for elevating the piece. See Carriage.

BRIDLE-*Arm Protect*, a guard used by the cavalry, which consists in having the sword-hilt above the helmet; the blade crossing the back of the head, the point of the left shoulder, and the bridle-arm; its edge directed to the left, and turned a little upwards, in order to bring the mounting in a proper direction to protect the hand.

BRIDON, or **Bridoon**, the snaffle and rein of a military bridle, which acts independent of the bit and curb at the pleasure of the rider.

BRIGADE, in military affairs, implies a party or division of a body of soldiers, whether horse, foot, or artillery, under the command of a brigadier. There are, properly speaking, three sorts of brigades, viz. the brigade of an army, the brigade of a troop of horse, and the brigade of artillery. A brigade of the army is either foot or dragoons, whose exact number is not fixed, but generally consists of 3, 4, 5 or 6 regiments, or battalions: a brigade of horse may consist of 8, 10 or 12 squadrons; and that of artillery, of 6, 8 or 10 pieces of cannon, with all their appurtenances. The eldest brigade takes the right of the first line, the second of the second line, and the rest in order, the youngest always possessing the centre, unless the commander deems a different arrangement expedient; and in such case mere etiquette always bends to orders.—The cavalry and artillery observe the same order.

The Horse Artillery in the British service are called the *horse Brigade*; and consist of 6 troops, with their guns and stores. Their head-quarters are at Woolwich, where handsome barracks, detached from those of the royal artillery, have been erected for their accommodation.

A **Brigade**, in the French ordination, is the same as our *Regiment*; but it consists of 3 battalions, each of which is equal to one of our regiments or 1000 men; a demi brigade is half a regiment, or a French battalion.

Brigade-*Major*, an officer appointed by the brigadier, to assist him in the management of his brigade. The most experienced captains are generally nominated to this post; who act in the brigade as major-generals do in the armies, receiving their orders from their commanders.

Brigade-*Major-General.* The military commands in Great Britain being divided into districts, an office has been established for the sole transaction of brigade duties. Through this office all orders from the commander-in-chief to the generals of districts relative to corps of officers, &c. must pass. For further information on this head, see James's *Regimental Companion*, 2d edition, vol. i. page 25.

Brigade *de Boulangers*, Fr. It was usual in the old French service, to brigade the bakers belonging to the army. Each brigade consisted of one master baker and three boys; the system is continued in the modern French army.

BRIGADIER, a military officer, whose rank is next above that of a colonel; appointed to command a corps, consisting of several battalions or regiments, called a brigade. This title in England is suppressed in time of peace, but revived in actual service in the field. Every brigadier marches at the head of his brigade upon duty. On the United States establishment, there is only one brigadier-general, who is chief in actual command; provision has been lately made by law for two more in case of war.

BRIGANDINE, or Brigantine, in ancient military history, a coat of mail, or kind of defensive armor, consisting of tin.

BRINGERS-*up*, an antiquated military expression, to signify the whole rear rank of a battalion drawn up, as being the hindmost men of every file.

BRINS-*d'Est*, Fr. large sticks or poles resembling small pickets, with iron at each end. They are used to cross ditches, particularly in Flanders.

BRISURE, in fortification, is a line of four or five fathom, which is allowed to the curtain and orillon, to make the hollow tower, or to cover the concealed flank.

BROADSIDE, in a sea fight, implies the discharge of all the artillery on one side of a ship of war.

BROAD-SWORD, a sword with a broad blade, chiefly designed for cutting; not at present much used in the British service, except by some few regiments of cavalry and Highland infantry. Among the cavalry, this weapon has in general given place to the sabre.

The principal guards with the broad-sword are:

The *inside guard*, (similar to carte in fencing,) which is formed by directing your point in a line about six inches higher than your antagonist's left eye, the hilt opposite your own breast, the finger-nails turned upwards, and the edge of the sword to the left.

The *outside guard*, (resembling tierce,) in which, by a turn of the wrist from the former position, the point of the sword is directed above your antagonist's right eye, the edge of the weapon turned to the right, and the finger-nails downward; the arm sufficiently straightened to the right to protect the outside of your body from the attack.

The *medium guard*, which is a position between the inside and outside guard, seldom used, as it affords very little protection.

The *hanging guard*, (similar to prime and seconde) in which the hilt of your sword is raised high enough to view your opponent under the shell, and the point directed towards his body.

The *St. George's guard*, which protects the head, and differs from the last-described only in raising the hand somewhat higher, and bringing the point nearer to yourself.

The swords worn by officers of the infantry being constructed either for cutting or thrusting, it is necessary for gentlemen to be acquainted both with the method of attacking and defending with the broad sword and with the rapier. Those who have not opportunity of regular lessons from a professed teacher, may obtain much useful information from a work entitled the Art of Defence on Foot, with the Broad Sword, &c. in which the spadroon or cut and thrust sword play is reduced into a regular system.

BROND. See Brand.

BROWNBILL, the ancient weapon of the English foot, resembling a *battle-ax*.

BRUNT. The troops who sustain the principal shock of the enemy in action, are said to bear the *brunt* of the battle.

BRUSQUER *une attaque*, Fr. is to open the trenches in the nearest approaches to a place, completing the works from the front towards the rear. This undertaking is extremely hazardous, unless the object invested, or attacked, be ill-garrisoned, have a narrow front to besiege, the ditches be dry, &c.

Brusquer *l'affaire*, Fr. to attack suddenly, and without attending to any regular rule of military manœuvre.

BUCCANEERS, in military history, a name frequently applied to those famous adventurers, consisting of pirates, &c. from all the maritime nations of Europe, who formerly joined together, and made war upon the Spaniards in America.

BUCKETS. Water-buckets are necessary appendages to field-pieces, to cool the gun when hotly engaged; otherwise it might fire itself, or run at the muzzle.

BUCKLER, a piece of defensive armor used by the ancients. It was always worn on the left arm, and composed of wicker-work, of the lightest sort, but most commonly of hides, fortified with plates of brass or other metals. The shape of it varied considerably, being sometimes round, sometimes oval, and often nearly square. The shield of Achilles in the Illiad, as well as the book itself merits the attention of the military student.

BUDGE-*Barrels*. See Barrel.

BUFF-*Leather*, in military accoutrements, is a sort of leather prepared from the buffalo, which, dressed with oil, after the manner of shamoy, makes what is generally called buff-skin. Sword-belts were made of this leather.

BUGLE-HORN, the old Saxon horn; it is now used by the light infantry, and particularly by riflemen. By its soundings, their manœuvres are directed, either in advancing, skirmishing, or retreating. It is also used by the horse artillery, and some regiments of light cavalry.

BUILDING, in a general sense, a fabric erected by art, either for devotion, magnificence, conveniency, or defence.

Military Buildings, are of various sorts, viz. powder-magazines, bridges, gates, barracks, hospitals, store-houses, guard-rooms, &c.

Regular Building, is that whose plan is square, the opposite sides equal, and all the parts disposed with symmetry.

Irregular Building, that whose plan is not contained within equal or parallel lines, either by the accident of situation, or the design of the builder, and whose parts are not relative to one another in the elevation.

Insulated Building, that which is not contiguous to any other, but is encompassed with streets, open squares, &c. or any building which stands in a river, on a rock surounded by the sea, marsh, &c.

Engaged Building, one surrounded with other buildings, having no front to any street or public place, nor any communication without, but by a common passage.

Interred or *sunk* Building, one whose area is below the surface of the place where it stands, and of which the lowest courses of stone are concealed.

In *building* there are three things to be considered, viz. commodity or conveniency; secondly, firmness or stability; thirdly, delight.

To accomplish which ends, Wotton considers the whole subject under two heads, namely, the seat or situation, and the work.

1. As for the seat, either that of the whole is to be considered, or that of its parts.

2. As to the situation, regard is to be had to the quality, temperature, and salubrity or healthiness of the air; that it be a good healthy air, not subject to foggy noisomeness from adjacent fens or marshes; also free from noxious mineral exhalations; nor should the place want the sweet influence of the sun-beams, nor be wholly destitute of the breezes of wind, that will fan and purge the air; the want of which would render it like a stagnated pool, and would be very unhealthy.

In the foundations of *buildings*, Vitruvius orders the ground to be dug up, to examine its firmness; that an apparent solidity is not to be trusted, unless the whole mould cut through be sound and solid: 'tis true, he does not say to what depth it should be dug: but Palladio determines it to be a sixth part of the height of the building.

The great laws of walling are:—1. That the walls stand perpendicular on the ground-work, the right angle being the foundation of all stability. 2. That the largest and heaviest materials be the lowest, as more proper to sustain others than be sustained themselves. 3. That the work diminish in thickness, as it rises, both for the ease of weight and to lessen the expence. 4. That certain courses, or lodges, of more strength than the rest, be interlaid, like bones, to sustain the wall from total ruin, if some of the under parts chance to decay. 5. Lastly, that the angles be firmly bound, they being the nerves of the whole fabric. These are sometimes fortified on each side the corners, even in brick buildings, with square stones; which add both beauty and strength to the edifice. See Stone, Bricks, Lime, Sand.

BULLETIN, *Fr.* any official account which is given of public transactions. See Gazette.

BULLETS, are leaden balls, wherewith all kinds of small fire-arms are loaded. The diameter of any bullet is found, by dividing 1.6706 by the cube root of the number, which shews how many of them make a pound; or it may be done in a shorter way From the logarithm .2228756 of 1.6706 subtract continually the third part of the logarithm of the number of bullets in the pound, and the difference will be the logarithm of the diameter required.

Thus the diameter of a bullet, whereof 12 weigh a pound, is found by subtracting 3597270, a third part of the logarithm of 12, from the given logarithm .2228756, or, when the logarithm is less than the former, an unit must be added, so as to have 1.2228756, and the difference .8631486 will be the logarithm of the diameter sought, which is .7297 inches; observing that the number found will always be a decimal, when the logarithm, which is to be subtracted, is greater than that of one pound; because the divisor is greater than the dividend in this case.

Hence, from the specific gravity of lead, the diameter of any bullet may be found from its given weight: for, since a cube foot weighs 11325 ounces, and 678 is to 355 as the cube 1728 of a foot, or 12 inches, is the content of the sphere, which therefore is 5929.7 ounces: and since spheres are as the cubes of their diameters; the weight 5929.7 is to 16 ounces, or 1 pound, as the cube 1728 is to the cube of the diameter of a sphere which weighs a pound; which cube therefore is 4.66263, and its root 1.6706 inches, the diameter sought.

The diameter of musket bullets differs but 1.50th part from that of the musket bore; for if the shot but just rolls into the barrel, it is sufficient. The English allow 11 bullets in the pound for the proof of muskets, and 14 in the pound, or 29 in two pounds, for service; 17 for the proof of carbines, and 20 for service; and 28 in the pound for the proof of pistols, and 34 for service The proof bullet of the U. S. *musket* made at Harper's ferry in Virginia, the barrel of which is 3 feet 8¼ inches, is *one fifteenth* of a pound; the service ball *one nineteenth*. The *Rifle* of Harper's ferry, the barrel of which is 2 feet 10 inches; the proof ball is *one-twenty-eighth* of a pound; the service ball is *one thirty-secondth* part of a pound. See Gun and Rifle.

Hollow Bullets, or shells, of a cylindrical shape. These have an opening and a fuze at the end, by which fire is communicated to the combustibles within, and an explosion takes place, similar to that occasioned by the blowing up of a mine.

Chain BULLETS, are two balls which are joined together by a chain, at any given distance from each other.

Branch BULLETS, two balls joined together by an iron bar.

Two-headed BULLETS, sometimes called ang'es, are two halves of a bullet which are kept together by means of a bar or chain.

BULWARK, the ancient name for bastion or rampart, which words see.

BURDEN, **BURTHEN**, in a general sense, implies a load or weight, supposed to be as much as a man, horse, &c. can well carry. A sound healthful man can raise a weight equal to his own, can also draw and carry 50lb. a moderate distance. An able horse can draw 350lb. though in length of time 300 is sufficient. Hence all artillery calculations are made. One horse will draw as much as 7 men, and 7 oxen will draw as much as 11 or 12 horses. Burthen likewise in a figurative sense means impost, tax, *&c.*

BURGANET, or BURGONET, *Fr.* a kind of helmet used by the French.

BURIALS, as practised by the military, are as follows, in the British service, viz. The funeral of a field-marshal shall be saluted with 3 rounds of 15 pieces of cannon, attended by 6 battalions, and 8 squadrons.

That of a general, with 3 rounds of 11 pieces of cannon, 4 battalions, and 6 squadrons.

That of a lieutenant-general, with 3 rounds of 9 pieces of cannon, 3 battalions, and 4 squadrons.

That of a major-general, with 3 rounds of 7 pieces of cannon, 2 battalions, and 3 squadrons.

That of a brigadier-general, 3 rounds of 5 pieces of cannon, 1 battalion, and 2 squadrons.

That of a colonel, by his own battalion, or an equal number by detachment, with 3 rounds of small arms.

That of a lieutenant-colonel, by 300 men and officers, with 3 rounds of small arms.

That of a major, by 200 men and officers, with 3 rounds of small arms.

That of a captain, by his own company, or 70 rank and file, with 3 rounds of small arms.

That of a lieutenant, by 1 lieutenant, 1 serjeant, 1 drummer, 1 fifer, and 36 rank and file, with 3 rounds.

That of an ensign, by an ensign, a serjeant, and drummer, and 27 rank and file, with 3 rounds.

That of an adjutant surgeon, and quarter-master, the same party as an ensign.

That of a serjeant, by a serjeant, and 19 rank and file, with 3 rounds of small arms.

That of a corporal, musician, private man, drummer, and fifer, by 1 serjeant and 13 rank and file, with 3 rounds of small arms.

All officers, attending the funerals of even their nearest relations, notwithstanding wear their regimentals, and a black crape round the left arm.

The pall to be supported by officers of the same rank with that of the deceased: if the number cannot be had, officers next in seniority are to supply their place.

The order of march to be observed in military funerals is reversed with respect to rank. For instance, if an officer is buried in a garrison town or from a camp, it is customary for the officers belonging to other corps to pay his remains the compliment of attendance. In which case the youngest ensign marches at the head immediately after the pall, and the general, if there be one, in the rear of the commissioned officers, who take their posts in reversed order according to seniority. The battalion, troop or company follow the same rule.

The expence for a regimental burial is to be charged against the captains of the respective troops or companies.

For further particulars, see Reid's Military Discipline.

BURR, in gunnery, a round iron ring, which serves to rivet the end of the bolt, so as to form a round head.

BURREL-*shot*, small bullets, nails, and stones discharged from any piece of ordnance.

BUSKINS, a kind of shoe, or half boot, adapted to either foot; formerly a part of the Roman dress, particularly for tragic actors on the stage. They are now much worn by the army.

BUTIN, *Fr.* booty or pillage. At the beginning of the French monarchy, and for a long time after its establishment, a particular spot was marked out by the prince or general, to which all persons belonging to the victorious army were directed to bring every species of booty that might have fallen into their hands. This booty was not divided, or appropriated according to the will and pleasure of the prince or general, but was thrown into different lots, and drawn for in common.

BUTMENTS. See BRIDGES.

BUTT, in gunnery, is a solid earthen parapet, to fire against in the proving of guns, or in practice.

BUTTON, in gunnery, a part of the cascable, in either a gun or howitzer, and is the hind part of the piece, made round in the form of a ball. See CANNON.

BUTTRESS. See COUNTERFORT.

BUZE, a wooden, or leaden pipe, to convey the air out of mines.

C.

CABAS, *Fr.* a basket made of rushes, used in ancient Languedoc and Roussillon, for the purpose of conveying stores and ammunition. This term is adopted in military inventories.

CABINET Council, a council held with privacy and unbounded confidence.

CABLE *ou* **Chable**, *Fr.* a large rope.

CADENCE, in tactics, implies a very regular and uniform method of marching, by the drum and music, beating time; it may not be improperly called mathematical marching; for after the length of a step is determined, the time and distance may be found. It is by a continual practice and attention to this, that the Prussians arrived at that point of perfection, once so much admired in their evolutions.

Cadence or *Cadency*, in cavalry, is an equal measure or proportion, which a horse observes in all his motions.

CADET, among the military, is a young gentleman, who applies himself to the study of fortification and gunnery, &c. and who sometimes serves in the army, with or without pay, 'till a vacancy happens for his promotion. The proper signification of the word is, younger brother. See Academy.

Cadet, *Fr.* differs in its signification from the term as it is used in our language. A cadet in the French service did not receive any pay, but entered as a volunteer in a troop or company, for the specific purpose of becoming master of military tactics.

In the reign of Louis XIV. there were companies of Cadets. The sons of noblemen and gentlemen of fashion were received into these companies, and when reported fit to undertake a military function, were nominated cornets, sub-lieutenants or ensigns. In the reign of Louis XV. a regulation was made, by which no cadet could be admitted unless he had passed his fifteenth year and was under twenty.

He was likewise obliged to prove his nobility by the testimony of four gentlemen! officers' sons, however, were admitted on proof being given, that their fathers had actually served, or had died in the service.

A chaplain was appointed to every cadet-company, whose duty it was to instruct the cadets in reading and writing. They had likewise a master in mathematics, a drawing master, a fencing master and dancing master.

Cadet, *Fr.* likewise means any officer that is junior to another.

CÆMENT, CEMENT, among engineers, a strong sort of mortar, used to bind bricks or stones together for some kind of moulding; or in cementing a block of bricks for the carving of capitals, scrolls, or the like. There are two sorts, i. e. hot *cement*, which is the most common, made of resin, beeswax, brick dust, and chalk, boiled together. The bricks to be cemented with this mixture, must be made hot in the fire, and rubbed to and fro after the *cement* is spread, in the same manner as joiners do when they glue two boards together. Cold *cement*, made of Cheshire cheese, milk, quick lime, and whites of eggs. This *cement* is less used than the former, and is accounted a secret known but to very few bricklayers.

CÆSTUS, in military antiquity, was a large gauntlet, composed of raw hides, used by pugilists at the public games.

CAGE *de la Bascule*, Fr. a space into which one part of the draw-bridge falls, whilst the other rises and conceals the gate.

CAIC, *Fr.* a skiff or boat belonging to a French galley.

CAIMACAN, in military history, an officer among the Turks, nearly answering to our lieutenant.

CAISSE, *Fr. Battre la caisse* is used in the French service to express the beating of a drum instead of *battre la Tambour.*

CAISSON, in military affairs, as a wooden frame or chest, made square, the side planks about 2 inches thick: it may be made to contain from 4 to 20 loaded shells, according to the execution they are to do, or as the ground is firmer or looser. The sides must be high enough, that when the cover is nailed on, the fuzes may not be damaged. *Caissons* are buried under ground at the depth of 5 or 6 feet, under some work the enemy intends to possess himself of; and when he becomes master of it, fire is put to the train conveyed through a pipe, which inflames the shells, and blows up the assailants. Sometimes a quantity of loose powder is put into the chest, on which the shells are placed, sufficient to put them in motion, and raise them above ground: at the same time that the blast of powder sets fire to the fuze in the shells, which must be calculated to burn from 1 to 2½ seconds. When no powder is put under the shells, a small quantity of mealed powder must be strewed over them, having a communication with the saucisson, in order to convey the fire to the fuzes.

Caisson, is a covered waggon, to carry bread or ammunition.

Caisson, *Fr.* is variously used in the French service.

Caisson *des bombes*, is a tub which is filled with loaded shells and buried even with the ground. It is inclined a little on one side, and by means of a quantity of powder which is scattered on the top and connected with the bottom by a sancisson, an explosion may be effected so as to throw the shells into the open air towards any given point. *Caissons* which are buried in the glacis produce great effect.

Caisson *pour les vivres*, Fr. a large chest whose lid rises in the centre somewhat like the capital of a pillar, in order that the rain may run off. The following dimensions were adopted to contain eight hundred rations at least.

The caisson or chest must be 8 French feet 4 inches long at least, 3 feet 4 inches high from the bottom to the extreme point of the lid, or chapiter, 2 feet 6 inches from its square sides to the bottom, 2 feet 5 inches broad at the bottom, outside, 2 feet 9 inches broad at top, and the cover or lid must be 5 feet 4 inches long. Poplar trees afford the best wood for the construction of caissons, because that species has a close grain, and is calculated to keep out rain.

CALATRAVA, a Spanish military order so called from a Fort of that name. The knights of Calatrava bear a cross; gules, fleur-de-lissed with green, &c.

CALCULATION, in military affairs, is the art of computing the amplitudes of shells, time of flight, projectile curve, velocity of shots, charges of mines, &c. together with the necessary tables for practice.

CALIBER, in gunnery, signifies the same as the bore or opening: and the diameter of the bore is called the diameter of its caliber. This expression regards all pieces of artillery.

Caliber-*Compasses*,
Calliper-*Compasses*, the name of a particular instrument used by gunners, for measuring the diameters of shot, shells, &c. as also the cylinder of cannon, mortars, and howitzers. They resemble other compasses, except in their legs, which are arched, in order that the points may touch the extremities of the arch. To find the true diameter of a circle, they have a quadrant fastened to one leg, and passing through the other, marked with inches and parts, to express the diameter required: the length of each ruler or plate is usually between the limits of 6 inches and a foot. On these rulers are a variety of scales, tables, proportions, &c. such as are esteemed useful to be known by gunners. The following articles are on the completest gunners-callipers, viz. 1. The measure of convex diameters in inches. 2. Of concave ditto. 3. The weight of iron shot from given diameters. 4. The weight of iron shot from given gun bores. 5. The degrees of a semicircle. 6. The proportion of troy and avoirdupois weight. 7. The proportion of English and French feet and pounds. 8. Factors used in circular and spherical figures. 9. Tables of the specific gravity and weights of bodies. 10. Tables of the quantity of powder necessary for proof and service of brass and iron guns. 11. Rules for computing the number of shot or shells, in a finished pile. 12. Rule concerning the fall of heavy bodies. 13. Rules for raising of water. 14. Rules for firing artillery and mortars. 15. A line of inches. 16. Logarithmetic scales of numbers, sines, versed sines and tangents. 17. A sectoral line of equal parts, or the line of lines. 18. A sectoral line of plans, and superficies. 19. A sectoral line of solids.

CALIBRE, *Fr.* See **Caliber.**

Calibre, *Fr.* signifies, in a figurative sense, cast or character; as *un homme de ce calibre*, a man of this cast.

CALIBRER, *Fr.* to take the measurement of the calibre of a gun. A particular instrument has been invented for this purpose. It resembles a compass with curved branches, which serve to grasp and measure a ball.

CALIVER, an old term for an arquebuse or musket.

CALOTE, *Fr.* a species of scull cap which officers and soldiers wear under their hats in the French cavalry, and which are proof against a sabre or sword. Calotes are usually made of iron, wick, or dressed leather, and every officer chuses the sort he likes best. Those delivered out to the troops are made of iron.

CALQUING,
CALKING, the art of tracing any kind of a military drawing, &c. upon some plate, paper, &c. It is performed by covering the backside of the drawing with a black or red colour, and fixing the side so covered upon a piece of paper, waxed plate, &c. This done, every line in the drawing is to be traced over with a point, by which means all the outlines of the drawing will be transferred to the paper or plate, &c.

CALTROPS, in military affairs, is a piece of iron having 4 points, all disposed in a triangular form: so that 3 of them always rest upon the ground, and the 4th stands upwards in a perpendicular direction. Each point is 3 or 4 inches long. They are scattered over the ground and passages where the enemy is expected to march, especially the cavalry, in order to embarrass their progress.

CAMARADE. See **Comrade.**

CAMION, *Fr.* a species of cart or dray which is drawn by two men, and serves to convey cannon-balls. These carts are very useful in fortified towns.

CAMISADE *or* **Camisado**, in military transactions, implies an attack by surprise, either during the night, or at break of day, when the enemy is supposed to be in their shirts asleep, or off his guard. The attack on Cremona was a camisade; the Irish regiment of Macguire, fought in their *shirts*, and frustrated the attack.

CAMOUFLET, in war, a kind of stinking combustibles blown out of paper cases, into the miners faces, when they are at work in the galleries of the countermines.

CAMPEMENT, *Fr.* an encampment. This word is also used to denote a detachment sent before the army to mark out the ground for a camp.

CAMP. With some trifling variations, camps are formed after the same manner in all countries. This principle seems general, that there should not be more ground occupied by the camp of a body of men, in front, than the extent of their line when drawn out in order of battle Intervals are however generally left between battalions of infantry of about one eighth their front, and between squadrons of cavalry of thirty or forty paces. An army is sometimes encamped in two lines, and sometimes in three; the distance between the lines varies according to the face of the country, from 200 to 600 yards, or more.

In the distribution of the front of a camp, two feet are generally allowed for every file of infantry, and three feet for each file of cavalry. When the ground will admit of it, the infantry are usually arranged in rows perpendicular to the front; each row containing the tents of one company; and the cavalry in the same position, each perpendicular row containing the horses of a troop.

The grenadiers and light infantry are usually placed in single rows on the flanks, and the battalion companies in double rows.

A single row, or one company, occupies in front, nine feet; and a double row, or two companies, twenty-one feet, if formed of the old pattern rectangular tents, which hold only five men each. But if the new bell tents are used, 15 feet must be allowed for a single row, and 30 feet for a double row in front.

In the cavalry, a row or troop occupies in front as follows:

	Old Tents.	New Tents.
Tent - -	3 yards.	5 yards.
From the front pole of the tent to picket rope	3	3
For the horse -	6	6
For the dung -	2	2
	14 yards.	16 yards.

The breadth of a row in front, whether of infantry or cavalry, being multiplied by the number of rows, and the product subtracted from the whole extent of front for a battalion of infantry, or a squadron of cavalry, will leave the space for the streets, which are generally divided as follows:

For the infantry, 59½ feet each.

For the cavalry, 30 feet each between the tents.

For the cavalry, 46 feet each between the horses.

The following is the distribution of the depth of a camp of infantry or cavalry, when the ground permits.

Distribution of the Depth of a Camp.	*Infantry.* Yards.	*Cavalry.* Yards.
From the quarter guard parade to the line of parade of battalion - - -	62	
From this first line of parade to the front of the serjeant's tents	16	
From this first line of parade to the front of the quarter master's	—	24
N B *These tents open to the front.*		
To the first picket of horses	—	5
Infant. for every tent in depth		
——- old pattern, 9 feet		
——- new pattern, 15 feet		
Cavalry: for every horse, 3 feet		
The soldiers tents for the infantry open to the streets The cavalry tents front to the horses heads.		
Suppose infantry 12 tents deep, old pattern	36	60
Suppose cavalry, 60 horses, old pattern		
From the last tent of infantry, or the last horse of the cavalry, to the front of the subalterns' tents - - -	15	12
These tents open to the rear.		
To the front of the line of captains - - -	15	15
These open to the front. The captains and subalterns in the rear of their troops or companies.		
To the front of the field officers	10	15
Open to the front, opposite the outside street of the battalion.		
To the colonel's - -	10	10
Opens to the front, opposite the main street of the battalion.		
To the staff officers - -	10	14
Open up the streets next the main street.		
To the first row of batmen's tents - - - -	10	15
The batmen's tents front their horses.		
To the first row of pickets for bat horses - - -	2	
To the second row of ditto	10	
To the second row of batmen	2	
To the front of the grand sutler's tent - - -	10	
The grand sutler is in the rear of the colonel.		
To the centre of the kitchens	15	20
The kitchens are 16 feet in diameter.		
To the front of the petty sutlers - - - -	15	15
Directly in the rear of the kitchens: there are allowed 6 yards in front by 8 deep.		
To the rear guard - -	15	15
Opens to the rear.		
Total depth required—Yards	253	220

If the ground on which the camp is to be formed will not, from a swamp in the rear, or any other circumstance, admit of each troop or company being formed in one row perpendicular to the front; the distribution of the front of a battalion or squadron must be more contracted than the above, and laid out as follows: Find how many perpendicular rows will be required, by dividing the number of men in the battalion or squadron by the number the ground will admit of in one row; then the number of rows being multiplied by the breadth of one in front, will give that part of the front to be occupied by the rows: and the difference between it and the whole front allowed for the battalion or squadron, will be left for the streets; which, if the streets are to be equal, must be divided by their number, to find a breadth of each; or is otherwise easily divided into streets of unequal breadths. When two guns are attached to a battalion, they are posted on the right in the following order: from the right of battalion to the centre of the first gun, four yards—from this to the second gun, 6 yards.—The muzzles of the guns in a line with the serjeants' rents.

The subaltern of artillery, if any, in a line with the subalterns of infantry.—The rear of the gunner's tents in a line with the rear of the battalion tents.

For the proper positions for camps, see the word RECONNOITRING; and for the encampment of a park of artillery, see the word PARK.

CAMP, in military affairs, is the whole extent of ground, in general, occupied by an army pitching its tents when in the field, and upon which all its baggage and apparatus are lodged. It is marked out by the quarter-master-general, who allots every regiment its ground. The extent of the front of a regiment of infantry is 200 yards, including the two battalion guns, and depth 520, when the regiment, contains 9 companies, each of 100 private men, and the companies tents in two rows; but when the companies tents stand in one row, and but 70 private men to each row, the front is then but 155 yards. A squadron of horse has 120 yards in front, and 100 for an interval between each regiment.

The nature of the ground must also be consulted, both for defence against the enemy, and for supplies to the army. It should have a communication with that army's garrisons, and have plenty of water, forage, fuel, and either rivers, marshes, hills, or woods to cover it. An army always encamps fronting the enemy, and generally in two parallel lines, besides a corps de reserve, about 500 yards distant from each other; the horse and dragoons on the wings, and the foot in the centre. Where, and how the train of artillery is encamped, see *Park of artillery*, and *Encampment of a regiment of artillery*, under the word ARTILLERY. Each regiment posts a subaltern's guard at 80 yards from the colors to the officers tent, called the *quarter guard*, besides a corporal's guard in the rear: and each regiment of horse or dragoons, a small guard on foot, called the *standard-guard*, at the same distance. The grand guard of the army consists of horse, and is posted about a mile distant towards the enemy.

In a siege, the *camp* is placed all along the line of circumvallation, or rather in the rear of the approaches, out of cannon-shot: the army faces the circumvallation, if there be any; that is, the soldiers have the town in their rear.

One thing very essential in the establishing a *camp*, and which should be particularly attended to, if the enemy is near; is, that there should not only be a commodious spot of ground at the head of the camp, where the army, in case of surprise, may in a moment be under arms, and in condition to repulse the enemy: but also a convenient field of battle at a small distance, and of a sufficient extent for them to form advantageously, and to move with facility.

The arrangement of the tents in *camp*, is nearly the same all over Europe, which is, to dispose them in such a manner, that the troops may form with safety and expedition

To answer this end, the troops are encamped in the same order as that in which they are to engage, which is by battalions and squadrons; hence, the post of each battalion and squadron in the line of battle, must necessarily be at the head of its own encampment. Gustavus Adolphus, king of Sweden, was the first who formed encampments according to the order of battle.

By this disposition, the extent of the *camp* from right to left, of each battalion and squadron, will be equal to the front of each in line of battle; and consequently, the extent from right to left of the whole *camp*, should be equal to the front of the whole army when drawn up in line of battle, with the same intervals between the several encampments of the battalions and squadrons, as are in the line.

There is no fixed rule for the intervals: some will have no intervals, some small ones, and others are for intervals equal to the front of the battalion or squadron. The most general method is, an interval of 60 feet between each battalion, and of 36 feet between each squadron.

Hence it follows, 1st, That the front line of the *camp* must be in a direction to face the enemy; 2dly, That at the head of the encampment of each battalion and squadron, there must be a clear space of ground, on which they may form in line of battle: and 3dly, That when the space taken up by the army is embarrassed with woods, ditches, and other obstructions, a communication must be opened for the troops to move with ease to the assistance of each other.

The *camps* of the Greeks and Romans were either round, square, or oval, or rather of an oblong square figure, with the sharp corners taken off; and to secure them against surprises, it was the prevailing custom to surround them with intrenchments. The *camps* of the Anglo-Saxons and Danes were generally round, as likewise those of the Anglo-Normans. The *camps* of the ancient Britons were of an oval form, composed of stakes, earth, and stones, rudely heaped together: but the practice of the present times is quite different; for the security of our *camps*, whose form is a rectangle, consists in being able to draw out the troops with ease and expedition at the head of their respective encampments.

CAMP *of a battalion of infantry*, is the ground on which they pitch their tents, &c.

The principal object in the arrangement of a *camp* is, that both officers and men may repair with facility and expedition to the head of the line; for which reason the tents are placed in rows perpendicular to the front of the camp, with spaces between them, called streets. The general method is, to form as many rows of tents as there are companies in the battalion; those for the private men in the front, and those for the officers in the rear. In the British service the several companies of a battalion are posted in camp, in the same manner as in the line of battle; that is, the company of grenadiers on the right, and that of light-infantry on the left; the colonel's company on the left of the grenadiers, the lieutenant-colonel's on the right of the light-infantry, the major's on the left of the colonel's, the eldest captain's on the right of the lieutenant-colonel's; and so on from right to left, 'till the two youngest companies come into the centre.

The battalion companies are posted two by two: that is, the tents of every two of these companies are ranged close together, to obtain, though they be fewer in number, larger and more commodious streets: the entrances of all the companies tents face the streets, except the first tent of each row belonging to the serjeants, which faces the front of the camp.

The number of tents in each perpendicular row, is regulated by the strength of the companies, and the number of men allowed to each tent, which is 5 men to 7 men: thence it follows, that a company of 60 men will require 9 to 12 tents, a company of 75 men 11 to 15 tents, and a company of 100 men 15 to 20 tents; but as it always happens, that some are on duty, fewer tents may serve in time of necessity.

When the battalion is in the first line of encampment, the privies are opened in the front, and at least 150 feet beyond the quarter-guard; and when in the second line, they are opened in the rear of that line.

To distinguish the regiments, camp colors are fixed at the flanks, and at the quarter and rear guard.

The colors and drums of each battalion are placed at the head of its own grand street, in a line with the bells of arms of the several companies. The officers espontoons were formerly placed at the colors, with the broad part of their spears to the front. The serjeants halberts were placed between, and on each side of the bells of arms, with their hatchets turned from the colors.

When two field-pieces are allowed to each battalion, they are posted to the right of it. Gustavus Adolphus, king of Sweden, was the first who ordered two field-pieces to each battalion, which are generally light 6 pounders.

Distribution of the front and depth of the CAMP *for a battalion of infantry.* The present mode of encampments differs from what was formerly adopted. The front of the *camp* for a battalion of 10 companies of 60 men each, is at present 400 feet, and during the late wars only 360 feet; the depth at present 759 feet, and during the late war 960. The front of the *camp* of a battalion of 10 companies of 100 men each, is at present 668 feet, and formerly only 592. The breadth of the streets from 45 to 55 feet, excepting the main street, which is sometimes from 60 to 90 feet broad.

Of the CAMP *of a battalion by a new method.* This is, by placing the tents in 3 rows parallel to the principal front of the *camp*; which is suitable to the 3 ranks in which the battalion is drawn up: the tents of the first row, which front the *camp*, are for the men of the front rank: the tents of the second row front the rear, and are for the men of the second rank; and the tents of the third row, which front the centre row, are for the men of the rear rank.

CAMP *of Cavalry.* The tents for the cavalry, as well as for the infantry, are placed in rows perpendicular to the principal front of the *camp*; and their number is conformable to the number of troops. The horses of each troop are placed in a line parallel to the tents, with their heads towards them.

The number of tents in each row, is regulated by the strength of the troops, and the number of troopers allotted to each tent is 5: it follows, that a troop of 30 men will require 6 tents, a troop of 60 men 12 tents, and a troop of 100 men 20 tents. The tents for the cavalry are of the same form as those of the infantry but more spacious, the better to contain the fire-arms, accoutrements, saddles, bridles, boots, &c. See TENTS.

Distribution of the front and depth of a CAMP *of cavalry.* Supposing the regiment to consist of 2 squadrons, of 3 troops each, and of 50 men in each troop, the extent of the front will be 450 feet, if drawn up in 2 ranks; but if drawn up in 3 ranks, the front will be only 300 feet, the depth 220, and the breadth of the back streets 30 feet, and the other streets 46 feet each. In the last war 600 feet were allowed each regiment of cavalry in front, 774 feet for the depth, and the breadth of the streets as above.

The standard-guard tents are pitched in the centre, in a line with the quarter-master's, The camp colors of the cavalry are also of the same color as the facings of the regiment, with the rank of the regiment in the centre: those of the horse are square, like those of the foot; and those of the dragoons are swallow-tailed. The dung of each troop is laid up behind the horses.

CAMP *duty*, consists in guards, both ordinary and extraordinary: the ordinary guards are relieved regularly at a certain hour every day (generally about 9 or 10 o'clock in the morning) the extraordinary guards are all kinds of detachments commanded on particular occasions for the further security of the *camp*, for covering the foragers, for convoys, escorts, or expeditions.

The ordinary guards are distinguished into grand guards, standard, and quarter guards; rear guards, picket guards, and guards for the general officers; train of artillery, bread waggons, pay-master general, quarter-master general, majors of brigade, judge advocate, and provost marshal.

The number and strength of the grand guards and out-posts, whether of cavalry or infantry, depend on the situation of the *camp*, nature of the country, and the position of the enemy. The strength of general officers guards is limited.

CAMP *maxims*, are 1. The principal rule in forming a *camp*, is to give it the same front the troops occupy in order of battle.

2. The method of encamping is by battalions and squadrons, except the several corps of artillery, which are encamped on the right and left of the park of artillery. See ARTILLERY PARK, and *Encampment of a regiment of artillery*.

3. Each man is allowed 2 feet in the ranks of the battalion, and 3 feet in the squadron: thence the front of a battalion of 500 men, formed 3 deep, will be 324 feet; and the front of a squadron of 150 men, formed 2 deep, will be 225 feet.

4. The depth of the *camp* when the army is encamped in 3 lines, is at least 2750 feet; that is, 750 feet for the depth of each line, and 250 feet for the space between each of those lines.

5. The park of artillery should always be placed on a dry rising ground, if any such situation offers; either in the centre of the front line, or in the rear of the second line; with all the train horses encamped in the rear of the park.

6. The bread-waggons should be stationed in the rear of the *camp*, and as near as possible to the centre, that the distribution of the bread may be rendered easy.

7. When the commander in chief encamps, it is generally in the centre of the army; and the town or village chosen for his residence is called head quarters.

8. That general is inexcusable, who, for his own personal accommodation, makes choice of quarters that are not properly secured, or at too great a distance to have an easy communication with the *camp*.

9. If the ground permits, the troops should be encamped as near to good water as possible.

10. When there are hussars or rifle corps, they are generally posted near the head quarters, or in the front of the army.

11. The ground taken up by the encampment of an army, should be equally distributed, and, if possible, in a straight line; for then the whole will have more room: for a crooked line, and an inequality of disposition, afford a very unpleasing view both of the camp, and of the troops when they are under arms.

12. Cleanliness is essentially necessary to the health of a *camp*, especially when it is to remain for any length of time. To maintain this, the privies should be often filled up, and others opened; at least every 6 days. The offal of cattle, and the carcasses of dead horses, should be buried very deep: and all kinds of corrupt effluvia, that may infect the air and produce epidemical disorders, should be constantly removed.

Choice of CAMPS. 1. At the beginning of a campaign, when the enemy is at too great a distance to occasion any alarm, all situations for *camps* that are healthy are good, provided the troops have room, and are within reach of water, wood, and provisions. More ground should be allowed to the troops in *camps* of duration, than in temporary ones.

2. *Camps* should be situated as near as possible to navigable rivers, to facilitate the conveyance of all manner of supplies; for convenience and safety are the principal objects for *camps*.

3. A *camp* should never be placed too near heights, from whence the enemy may overlook it; nor too near woods, from whence the enemy may surprise it. If there are eminences, not commanded by others, they should be taken into the *camp*; and when that cannot be done, they should be fortified.

4. The choice of a *camp* depends in a great measure on the position of the enemy, on his strength, and on the nature and situation of the country.

5. A skilful general will avail himself of all the advantages for a *camp*, which nature may present, whether in plains, mountains, ravines, hollows, woods, lakes, inclosures, rivers, rivulets, &c.

6. The disposition of the troops in *camp* should depend on the nature and situation of the ground: as there are occasions which require all the infantry to encamp on the right, and the cavalry on the left; and there are others which re-

quire the cavalry to form in the centre, and the infantry on the wings.

7. A *camp* should never be formed on the banks of a river, without the space of at least 2 or 3000 feet, for drawing out the army in order of battle: the the enemy cannot then easily alarm the *camp*, by artillery and small arms from the other side.

8. *Camps* should never be situated near rivers that are subject to be overflowed, either by the melting of the snow, or by accidental torrents from the mountains. Marshy grounds should also be avoided, on account of the vapors arising from stagnant water, which infect the air.

9. On the choice of *camps* and posts, frequently depends the success of a campaign, and even sometimes of a war.

Camp *guards*. They are of two sorts, the one serves to maintain good order within the *camp*; and the other, which is stationed without the *camp*, serves to cover and secure it against the enemy. These guards are formed of both infantry and cavalry; and in proportion to the strength of the army, situations of the *camp*, and disposition of the enemy. Sometimes it is required, that these guards should consist of the 8th part of the army; at others, of the 3d part; and when an attack from the enemy is apprehended, even of the half.

Manner of stationing the Camp *guards*. It is of the utmost consequence to station the guards in such places, as may enable them to discover easily whatever approaches the *camp*.

2. The guards of the cavalry are generally removed further from the *camp*, than those of the infantry; but never at so great a distance, as to endanger their being cut off: within cannon-shot is a very good distance. They are often stationed in highways, in open places, and on small heights; but, they are always so disposed, as to see and communicate with one another.

3. The vedettes to the out-posts should be double: for, should they make a discovery, one may be detached to inform the officer commanding the out-post, and the other remain on duty: they should not be at too great a distance from their detachment: probably, about 50 or 60 paces will be sufficient.

4. The guards of infantry have different objects, and are differently stationed: their duty is, to receive and support the guards of cavalry in cases of need: to protect the troops sent out for wood, forage, or water; in short to prevent any approaches from the small parties of the enemy. Some are stationed in the churches or the neighboring villages, in barns, houses, and in passages and avenues of woods: others are stationed on the borders of rivulets, and in every place necessary to secure the *camp*. Guards that are stationed in churches, in woods or among trees, barns, and houses, should if possible, be seen from the army, or at least from some grand guard in its neighborhood, that signals may be readily perceived and repeated.

5. The guards of infantry are generally fixed; that is, they have the same post both day and night, except such as are to support and protect the guards of cavalry, and to cover the forage grounds. All out-guards should have intrenching-tools with them.

6. The guards of cavalry have generally a day-post and a night-post; the latter is seldom more than 4 or 500 paces from the *camp*; one third should be mounted, one third bridled. and one third feeding their horses; but when near the enemy, the whole guard should be kept mounted during the night.

7. The security and tranquillity of a *camp* depending upon the vigilance of the guards, the officers who command them cannot be too active in preventing surprises: a neglect in this particular is often of fatal consequence. Though an officer should, at all times, be strictly attentive to every part of the service, yet he should be more particularly watchful in the night than in the day. The night is the time most favorable for surprises: as those who are not on duty, are generally asleep, and cannot immediately afford assistance; but in the day time, the attention of all the troops is turned to the movements of the enemy: they are sooner under arms, sooner in readiness to march, and in much less danger of being thrown into confusion. Those who wish to be better acquainted with the nature and mode of encampments, may read Mr. Lochée's useful *Essay on Castrametation*.

Concerning the healthiness of the different seasons of a campaign, the ingenious Dr. Pringle has the following observations. The first 3 weeks is always sickly; after which the sickness decreases, and the men enjoy a tolerable degree of health throughout the summer, unless they get wet clothes. The most sickly part of the campaign is towards the end of August, whilst the days are still hot, but the nights cold and damp with fogs and dews; then, if not sooner, the dysentery prevails; and though its violence is over by the beginning of October, yet the remitting fever, gaining ground, continues throughout the rest of the campaign, and never entirely ceases, even in winter quarters, 'till the frost begins. He likewise observes, that the last 14 days of a campaign, if protracted 'till the beginning of November, are attended with more sickness than the two first monrhs of the encampment. As to winter expeditions, though severe in appearance, he tells us, they are attended with little sickness, if the men have strong and good shoes, warm quarters, fuel, and provisions enough.

Camp-*Colormen*. Each regiment has generally 6, and sometimes 1 per company: they always march with the quarter-master, to assist in making the necessary preparations against the arrival of the regiment in a new encampment. They likewise carry the camp-colors.

Camp-*Fight*, an old term for Combat.

***Flying*-Camp**, or army, generally means a strong body of horse and foot, commanded for the most part by a lieutenant-general, which is always in motion both to cover its own garrisons, and to keep the enemy's army in a continual alarm. It is sometimes used to signify the ground on which such a body of men encamps.

Camp-*Utensils*, in war time, are hatchets, shovels, mattocks, blankets, camp-kettles, canteens, tents, poles and pins: that is, each company has 10 shovels, and 5 mattocks; each tent 1 hatchet, 2 blankets, 1 camp-kettle, with its linen bag; and each soldier 1 canteen, 1 knapsack, and 1 havre-sack.

Camp-*diseases* are chiefly bilious fevers, malignant fevers, fluxes, scurvy, rheumatism, &c.

Camp is also used by the Siamese and some other nations in the East Indies, to express the quarters where the persons from different countries, who come to trade with them, usually reside.

CAMPUS *Maii*, an anniversary assembly which was observed by ancient pagans on May-day, when they mutually pledged themselves to one another for the defence of the country against foreign and domestic foes.

Campus *Martius*, a public place so called among the Romans from the God Mars.

CAMPAIGN, in military affairs, the time every year that an army continues in the field, in war time. We also say, a man has served so many campaigns, i. e. years: the campaign will begin at such a time; this will be a long campaign, &c. The word is also used for an open country before any towns, &c.

CANNIPERS. See Callipers.

CANNON or *pieces of* Ordnance, in the military art, imply machines having tubes of brass or iron. They are charged with powder and ball, or sometimes cartridges, grape and canister shot, &c.

The length is distinguished by three parts; the first re-inforce, the second reinforce, and the chace: the first re-inforce is 2-7ths, and the second 1-7th and a half of the diameter of the shot. The inside hollow, wherein the powder and shot are lodged, is called the bore, &c.

History of Cannon or *pieces of* Ordnance. They were originally made of iron bars soldered together and fortified with strong iron hoops; some of which are still to be seen, viz one in the tower of London, two at Woolwich, one in the royal arsenal at Lisbon, they are numerous in all parts of Asia; and baron Tott describes them in Turkey. Others were made of thin sheets of iron rolled up together, and hooped; and on emergencies they were made of leather, with plates of iron or copper. These pieces were made in a rude and imperfect manner, like the first essays of many new inventions. Stone balls were thrown out of these cannon, and a small quantity of powder used on account of their weakness. These pieces have no ornaments, are placed on their carriages by rings, and are of cylindrical form. When or by whom they were made, is uncertain; however we read of *cannon* being used as early as the 13th century, in a sea engagement between the king of Tunis and the Moorish king of Seville. The Venetians used *cannon* at the siege of Claudia Jessa, now called Chioggia, in 1366, which were brought thither by two Germans, with some powder and leaden balls; as likewise in their wars with the Genoese in 1369. Edward III. of England made use of *cannon* at the battle of Cressy in 1346, and at the siege of Calais in 1347. *Cannon* were made use of by the Turks at the siege of Constantinople, then in possession of the Christians, in 1394, or in that of 1452, that threw a weight of 500lb. but they generally burst, either the first, second, or third shot. Louis XII. had one cast at Tours, of the same size, which threw a ball from the Bastille to Charenton. One of those famous *cannon* was taken at the siege of Diu in 1546, by Don John de Castro, and is in the castle of St. Juiliao da Barra, 10 miles from Lisbon: its length is 20 feet 7 inches, diameter at the centre 6 feet 3 inches, and discharges a ball of 100lb. It has neither dolphins, rings, nor button, is of a curious kind of metal, and has a large Hindustanee inscription upon it, which says it was cast in 1400.

Ancient and present names of Cannon. Formerly they were distinguished by uncommon names; for in 1503, Louis XII. had 12 brass cannon cast, of an uncommon size, called after the names of the 12 peers of France. The Spanish and Portuguese called them after their saints. The emperor Charles V. when he marched before Tunis, founded the 12 Apostles. At Milan there is a 70 pounder, called the Pimontelle; and one at Bois-le-duc, called the devil. A 60-pounder at Dover castle, called Queen Elizabeth's Pocket-pistol. An 80-pounder in the tower of London (formerly in Sterling castle) called Mounts-meg. An 80-pounder in the royal arsenal at Berlin, called the Thunderer. An 80-pounder at Malaga, called the Terrible. Two curious 60-pounders in the arsenal at Bremen, called the Messengers of bad news. And lastly an uncommon 70-pounder in the castle of St. Angelo at Rome, made of the nails that fastened the copper plates which covered the ancient Pantheon, with this inscription upon it: *Ex clavis trabalibus porticus Agrippæ.*

In the beginning of the 15th century these uncommon names were generally abolished, and the following more universal ones took place, viz.

		Pounders	Cwt.
Cannon royal, or carthoun		= 48	about 90
Bastard cannon, or ¾ carthoun		= 36	79
½ carthoun		= 24	60
Whole culverins		= 18	50
Demy culverins		= 9	30
Falcon		= 6	25
Saker	lowest sort	= 6	13
	ordinary	= 5	15
	largest size	= 8	18
Basilisk		= 48	85
Serpentine		= 4	8
Aspik		= 2	7
Dragon		= 6	12
Syren		= 60	81
Falconet		= 3, 2, & 1	15, 10, 5.

Moyens, which carried a ball of 10 or 12 ounces, &c.

Rabinet, which carried a ball of 16 ounces.

These curious names of beasts and birds of prey were adopted, on account of their swiftness in motion, or of their cruelty; as the *falconet*, *falcon*, *saker*, *and culverin*, &c. for their swiftness in flying; the *basilisk*, *serpentine*, *aspik*, *dragon*, *syren*, &c. for their cruelty. See the Latin poet Forcastarius.

At present *cannon* or pieces of ordnance take their names from the weight of the ball they discharge: thus a piece that discharges a ball of 24 pounds, is called a 24 pounder; one that carries a ball of 12 pounds, is called a 12-pounder; and so of the rest, divided into the following sorts, viz.

Ship-guns, consisting of 42, 32, 24, 18, 12, 9, 6, and 3 pounders.

Garrison-guns, of 42, 32, 24, 18, 12, 9, and 6 pounders.

Battering-guns, of 24, 18, and 12 pounders.

Field-pieces, of 18, 12, 9, 6, 3, 2, 1½, 1, and ½ pounders.

The British seldom use any of lower calibre than 6 in the field.

The metal of which brass cannon is made, is in a manner kept a secret by the founders; yet, with all their art and secrecy, they have not hitherto found out a composition that will stand a hot engagement without melting, or at least being rendered useless. Those cast at Woolwich bid fair towards this amendment. The respective quantities which should enter into this composition, is a point not decided; every founder has his own proportions, which are peculiar to himself. The most common proportions of the ingredients are the following, viz. To 240lb. of metal fit for casting, they put 68lb. of copper, 52lb. of brass, and 12lb. of tin. To 4200lb. of metal fit for casting, the Germans put 3687 33-41lb. of copper, 204 13-41lb. of brass, and 307 36-41lb. of tin. Others again use 100lb. of copper, 6lb. of brass, and 9lb. of tin; and lastly, others 100lb. of copper, 10lb. of brass, and 15lb. of tin. With respect to iron guns, their structure is the same as that of the others, and they generally stand the most severe engagements, being frequently used on shipboard. Several experiments have taught that the Swedish iron guns are preferable to all others in Europe.

Cannon is now generally cast solid, and the cavity bored afterwards by a very curious machine for that purpose, where the gun is placed in a perpendicular position; but of late these machines have been made to bore horizontally, and much truer than those that bore in a vertical form. This new machine was first invented at Strasburg, and greatly improved by Mr. Verbruggen, a Dutchman, who was head founder at Woolwich, where probably the best horizontal boring machine in Europe has been lately fixed; it both bores the inside, and turns and polishes the outside at once. For length and weight of French and English cannon see Guns.

Names of the several Parts of a Cannon.

The grand divisions exterior, are as follows, viz.

First re-inforce, is that part of a gun next the breech, which is made stronger, to resist the force of powder.

Second re-inforce. This begins where the first ends, and is made something smaller than the first.

The chace, is the whole space from the trunnions to the muzzle.

The muzzle, properly so called, is the part from the muzzle astragal to the end of the piece.

Small divisions exterior.

The cascable, the hindermost part of the breech, from the base-ring to the end of the button.

The cascable-astragal, is the diminishing part between the two breech mouldings.

The neck of the cascable, is the narrow space between the breech moulding and the button.

The breech, is the solid piece of metal behind, between the vent and the extremity of the base-ring, and which terminates the hind part of the gun, exclusive of the cascable.

The breech-mouldings, are the eminent parts, as squares or rounds, which serve only for ornaments to the piece, &c.

The base-ring and ogee, are ornamental mouldings; the latter is always in the shape of an S, taken from civil architecture, and used in guns, mortars, and howitzers.

The vent-field, is the part from the vent to the first re-inforce astragal.

The vent-astragal and fillets, are the mouldings and fillets at or near the vent.

The charging cylinder, is all the space from the chace-astragal to the muzzle-astragal.

The first re-inforce ring and ogee, is the ornament on the second re-inforce.

The first re-inforce astragal, is the ornament between the first and second re-inforce.

The chace-girdle, is the ornament close to the trunnions.

The trunnions, are two solid cylindrical pieces of metal on every gun, which project from the piece, and by which it is supported upon its carriage as an axis.

The dolphins, are the two handles, placed on the second re-inforce ring of brass guns, resembling the fish of that name: they serve for mounting and dismounting the guns.

The second re-inforce ring and ogee, are the two ornaments joining the trunnions.

The second re-inforce astragal, is the moulding nearest the trunnions.

The chase-astragal and fillets, the two last-mentioned ornaments jointly.

The muzzle-astragal and fillets, the joint ornaments nearest the muzzle.

The muzzle-mouldings, the ornaments at the very muzzle of the piece.

The swelling of the muzzle, the projected part behind the muzzle-mouldings.

Interior Parts.

The mouth, or entrance of the bore, is that part where both powder and ball are put in, or the hollow part which receives the charge.

The vent, in all kinds of fire-arms, is commonly called the touch-hole; it is a small hole pierced at the end, or near it, of the bore or chamber, to prime the piece with powder, or to introduce the tube, in order, when lighted, to set fire to the charge.

The chamber, which is only in large calibers, is the place where the powder is lodged, which forms the charge.

Tools for loading and firing CANNON, are rammers, sponges, ladles, worms, hand-spikes, wedges, and screws.

Coins, or *Wedges*, to lay under the breech of the gun, in order to elevate or depress it.

Hand-spikes, serve to move and to lay the gun.

Ladles, serve to load the gun with loose powder.

Rammers, are cylinders of wood, whose diameter and *axis* are equal to those of the shot: they serve to ram home the wads put upon the powder and shot.

Sponge, is fixed at the opposite end of the rammer, covered with lamb-skin, and serves to clean the gun when fired.

Screws, are used to field-pieces, instead of coins, by which the gun is kept to the same elevation.

Tools necessary for proving CANNON, are, a searcher with a reliever, and a searcher with one point.

Searcher, is an iron, hollow at one end to receive a wooden handle, and on the other end has from four to eight flat springs of about eight or ten inches long, pointed and turned outwards at the ends.

The reliever, is an iron flat ring, with a wooden handle, at right angles to it.—When a gun is to be searched after it has been fired, this searcher is introduced; and turned every way, from end to end, and if there is any hole, the point of one or other of the springs gets into it, and remains till the reliever, passing round the handle of the searcher, and pressing the springs together, relieves it.

When there is any hole or roughness in the gun, the distance from the mouth is marked on the outside with chalk.

The other searcher has also a wooden handle, and a point at the fore end, of about an inch long, at right angles to the length: about this point is put some wax, mixed with tallow, which, when introduced into the hole or cavity, is pressed in, when the impression upon the wax gives the depth, and the length is known by the motion of the searcher backwards and forward: if the fissure be one ninth of an inch deep, the gun is rejected. See INSTRUMENTS.

N. B. The strength of gunpowder having been considerably increased by Col. Congreve, of the British Artillery, the quantity for service has been somewhat reduced. That for proof remaining as heretofore.

CANNON *Bail* See BALLS.
CANNON *Shot.* See SHOT.

CANNONIER, a person who manages a gun. See GUNNER.

CANNON-*Baskets.* See GABIONS.

To nail CANNON. See NAIL.

CANNONADE, in artillery, may be defined the application of artillery to the purposes of a land war, or the direction of its efforts against some distant object intended to be seized or destroyed; as the troops in battle, battery, fortress, or outwork.

Cannonading is therefore used from a battery, to take, destroy, burn, or drive the enemy from the defences, &c. and to batter and ruin the works or fortified towns.

CANON-BIT, that part of the bit which is let into the horse's mouth.

CANTEENS, in military articles, are tin vessels used by the soldiers on a march, &c. to carry water or other liquor in, each holds about 2 quarts.

CANTONMENTS are distinct situations, where the different parts of an army lie as near to each other as possible, and in the same manner as they encamp in the field. The chief reasons for cantoning an army are, first, when the campaign begins early; on which occasion, in cantoning your troops, two objects demand attention, viz. the military object, and that of subsistence: the second is, when an army has finished a siege early, the troops are allowed to repose till the fields produce forage for their subsistence: the third reason is, when the autumn proves rainy, and forage scarce, the troops are cantoned to protect them from the bad weather.

CANVAS-BAGS. See Bags, *Sand*-Bags, &c.

CAPARISON, under this term is included the bridle, saddle, and housing, of a military horse.

CAPITAINE *en pied*, Fr. an officer who is in actual pay and does duty.

Capitaine *reformé*, Fr. a reduced officer.

Capitaine *general des vivres*, Fr. the person who has the chief management and superintendance of military stores and provisions.

Capitaine *des portes*, Fr. a commissioned officer who resides in a garrison town, and whose sole duty is to receive the keys of the gates from the governor every morning, and to deliver them to him every night, at appointed hours.

CAPITAL, in fortification, is an imaginary line which divides any work into two equal and similar parts. It signifies also, a line drawn from the angle of a polygon to the point of the bastion, or from the point of the bastion to the middle of the gorge.

To CAPITULATE, to surrender any place or body of troops to the enemy, on certain stipulated conditions.

CAPITULATION, in military affairs, implies the conditions on which the garrison of a place besieged agrees to deliver it up, &c. This is likewise the last action, both in the attack and defence of a fortification, the conditions of which may be of various kinds, according to the different circumstances or situations in which the parties may be placed.

As soon as the capitulation is agreed on, and signed, hostages are generally delivered on both sides, for the exact performance of the articles; part of the place is delivered to the besiegers, and a day appointed for the garrison to evacuate the place. The usual and most honorable conditions are, with arms and baggage, drums beating and colors flying, matches lighted, and some pieces of artillery; waggons, and convoys for the baggage, sick and wounded, &c.

CAPONNIER, in fortification, is a passage made from one work to another, of 10 or 12 feet wide, and about five feet deep, covered on each side by a parapet, terminating in a glacis. Caponniers are sometimes covered with planks and earth. See Fortification.

CAPS, in gunnery, are pieces of leather, or more commonly sheep-skins, to cover the mouth of mortars when loaded, till they are fired, to prevent damps, or rain getting in.

Cap-*Squares*. See Carriages.

Cap-a-pie, in military antiquity, implies being clothed in armor from head to foot.

CAPSTERN, } in military machines,
CAPSTAN, } signifies a strong massy piece of timber, in the form of a truncated cone, having its upper part, called the drum-head, pierced with a number of square holes, for receiving the levers. By turning it round, several actions may be performed that require an extraordinary power.

CAPTAIN is a military officer, who is commander of a troop of cavalry, or of a company of foot or artillery. The name of captain was the first term made use of to express the chief or *head (caput)* of a company, troop, or body of men. He is both to march and fight at the head of his company. A captain of artillery and engineers ought to be master of the attack and defence of fortified places, and captains of infantry or cavalry should acquire some knowlege of those branches; artillerists should be good mathematicians, and understand the raising of all kinds of batteries, to open the trenches, to conduct the sap, to make mines and fougasses, and to calculate their charges. They ought further to be well acquainted with the power of artillery, the doctrine of the military projectile, and the laws of motion, together with the system of mechanics; and should be good draughtsmen. A captain has in most services the power of appointing his own serjeants and corporals, and may by his own authority reduce or break them; but he cannot punish a soldier with death, unless he revolts against him on duty.

The captains of artillery in the Prussian service, rank as majors in the army, and have an extraordinary pay, on account of the great qualifications demanded of them; and the captains of bombardiers, miners, and artificers, in the Portuguese service, have 9 dollars a month more than the captains of artillery in the same regiment.

Captain-*General*. The King is *captain-general* of all the forces of Great Britain. This term implies the first rank, power, and authority in the British army. This power was delegated to the Duke of York, in 1799.

Captain-*Lieutenant*, the commanding officer of the colonel's troop or company in the British army, in case the colonel is absent, or he gives up the command of it to him. He takes rank as full captain, by an order in 1772, and by a late regulation, succeeds to the first vacant troop or company; the price of a captain-lieutenancy being the same as that of a captaincy. This title is still used in foreign services.

Captain *reformed*, one who, upon a reduction of the forces, on the termination of war, loses his company, yet keeps his rank and pay, whether on duty or not.

Captain *on half pay*, is one who loses his company on the reduction of an army.

and retires on half-pay, until seniority puts him into duty and full pay again.

Captain *en second*, or second captain, is one whose company has been broke, and who is joined to another, to serve under the captain of it.

In some armies the *captain en seconde*, is also a second captain to the same company, whose rank is above all the lieutenants, and below all the captains of the same corps.

CAPTURE *de deserteurs*, Fr. Under the old government of France, a particular order existed, by which every intendant de province or commissaire de guerre was authorised to pay one hundred livres, or twenty dollars, to any person or persons who should apprehend and secure a deserter; and three hundred livres, or seventy dollars for every man that could be proved to have enticed a soldier from the regular army or militia.

CAQUE *de poudre*, Fr. a term synonymous to a tun or barrel of powder.

CAR, in military antiquity, a kind of small carriage; figuratively, used by the poets for a chariot: it is mounted on wheels, representing a stately throne, used in triumphs and on other solemn occasions.

CARABINIERS, *Fr.* One complete regiment of carabineers was formed, during the monarchy of France, out of the different corps of cavalry. They were usually distributed among other bodies of troops, and it was their duty to charge the advanced posts of the enemy.

CARABINS, *Fr.* These were light-armed horsemen, who sometimes acted on foot. They were generally stationed in the out-posts, for the purpose of harrassing the enemy, defending narrow passes, &c. In action, they usually fought in front of the dragoons, or upon the wings of the first line. Their name is derived from the Arabian word *Karab*, which signifies, generally, any warlike instrument.

CARAVAN; *Caravanne*, Fr. from a Turkish word, which signifies, a troop of travellers, who go armed by sea or land.

CARBINE, in military affairs, is a fire-arm somewhat smaller than the firelock of the infantry, and used by the cavalry. It carries a ball of 24 in the pound: its barrel is three feet long, and the whole length, including the stock, 4 feet.

Rifled-**Carbines**, are generally of the same dimensions with the above, and have their barrels rifled spirally from the breech to the mouth; so that when the ball, which is forced into it, is driven out again by the strength of the powder, it is lengthened about the breadth of a finger, and marked with the rifle of the bore.—Fire-arms of this kind have a much greater range than any other, because the rifle of the barrel gives a spiral direction, instead of a rotatory direction to the ball, which by that means makes the greater resistance at the first inflammation of the powder, giving time for the whole charge to take fire, before the ball is out of the bore. These arms are used by horse-riflemen, the chasseurs, or light infantry.

CARBINEERS, or *Carabineers*. All regiments of light armed horse were formerly called so; but since the establishing of hussars and chasseurs, they have lost that denomination; and now all the cavalry are called carabineers, who carry the carabine.

CARACOLE, a semi-circular motion or half-wheel; chiefly applied to that used either by individuals or squadrons of cavalry, to prevent an enemy from discovering where they intend to make their attack.

CARBON, charcoal. It is the name in the new chemistry given to every body which has the properties or qualities of the carbonic acid or charcoal; impregnated in certain degrees, bodies are called *carbonates*. See **Aigremone**.

Carbone. Pure charcoal is called carbone in the new chemical nomenclature. It is the black residuum of vegetables, which have suffered a complete decomposition of their volatile principles by fire. Charcoal is black, brittle, sonorous, and light. It is placed among simple bodies, because no experiment has hitherto shown the possibility of decomposing it. It exists in the animal, vegetable, and mineral regions. When it is required to procure carbone in a state of great purity, it must be dried by strong ignition in a closed vessel.

Carbonic acid. Carbonaceous acid. Fixed air. Mephitic gas. Aerial acid. The name of cretaceous acid appears to agree best with this substance, because it is contained in very large quantities in chalk; and there is no other body with which it has so strong an affinity, as with lime, which composes the base of this earthy salt. The carbonic acid possesses all the more obvious qualities of air, and exists in the atmosphere, of which it is a small part.

Atmospheric air. In 100 parts of atmospheric air there are 72 of azote, 27 of oxygene, and 1 of carbonic acid.

CARCASS, a composition of combustibles. Carcasses are of two sorts, oblong and round: the uncertain flight of the first sort has almost rendered them useless. They are prepared in the following manner: boil 12 or 15 lb. of pitch in a glazed earthen pot; mix with that 3 lb. of tallow, 30 lb. of powder, 6 lb. of salt-petre, and as many stopins as can be put in. Before the composition is cold, the carcass must be filled; to do which, smear your hands with oil or tallow, and fill the carcass 1-third full with the above composition; then put in loaded pieces of gun or pistol barrels, loaded grenades, and fill the intervals with composition; cover the whole over with coarse cloth, well sewed together, kep-ing it in a round form. Then put it into the carcass, having a hollow top and bottom, with bars running between them to hold them together, and composed of four slips of iron joined at top, and fixed at the bottom, at equal distances, to a piece of iron, which, together with the hoops, when filled, form a complete globular body. When quite finished and cold, the carcass must be steeped in melted pitch, and then instantly immerged in cold water. Lastly, bore three or four holes at top, and fill the same with fuze composition, covering the holes with pitch until used. Carcasses are thrown out of mortars, and weigh from 50 to 230 lb. according to the size of the mortars they are to be thrown out of. There are other carcasses for the sea-service, which differ from a shell only in the composition, and in the four holes from which it burns when fired.

Carcasses were first used by the bishop of Munster, at the siege of Groll, in 1672, where the duke of Luxemburg commanded.

CARCASSES. Their dimensions and weight, 1796.

Kinds.		Weight.									Time each will burn.
		Empty.			Of composition.			Complete.			
Round for		lb.	oz.	dr.	lb.	oz.	dr.	lb.	oz.	dr.	Min
Mortars and How'rs.	13	194	10	11	18	14	—	213	8	16	11
	10	89	13	11	7	8	11	97	6	11	8½
	8	44	9	5	4	4	11	48	14	—	5-
For Guns.	42	27	3	—	2	7	11	29	10	11	5
	32	20	13	5	1	14	5	22	11	11	4-
	24	14	12	—	1	9	11	16	5	11	4
	18	11	13	11	1	1	5	12	15	—	4
For Carronades.	68	—	—	—	—	—	—				
	42	26	—	—	2	7	—	28	7	—	4-
	32	21	10	—	1	13	—	23	7	—	4
	24	14	5	—	2	5	—	16	10	—	3-
	18	10	4	—	1	2	—	11	6	—	3
Oblong for											
Mortars and How'rs.	10	36	7	5	35	10	—	72	1	5	12
	8	16	5	5	18	2	—	34	7	5	10
	5½	1	12	2	6	15	—	8	11	3	6
	4-	1	0	6	3	11	7	4	11	13	4

Note.—It being found at the siege of Quebec, that the quantity of powder requisite for throwing the carcasses into the town, always destroyed them, the method of filling the interval between the powder and carcass with turf was adopted; and found to preserve the carcass, and to produce every desired effect.

CARIPI, a kind of cavalry in the Turkish army, which to the number of 1000 are not slaves, nor bred up in the seraglio, like the rest, but are generally Moors, or renegado Christians, who have obtained the rank of horse-guards to the Grand Seignior.

CARMINE, a bright scarlet color, which is used in plans of fortification, and serves to describe those lines that have mason work.

CAROUSAL, in military history, signifies a magnificent entertainment, exhibited by princes or other great personages, on some public occasion, consisting of cavalcades of gentlemen richly dressed and equipped, after the manner of the ancient cavaliers, divided into squadrons, meeting in some public place, and performing justs, tournaments, &c.

CARRIAGES, in military affairs, are of various kinds, viz.

Garrison-Carriages, are those on which all sorts of garrison-pieces are mounted. They are made much shorter than field-carriages, and have generally iron trucks instead of wheels.

As the trucks of garrison-carriages are generally made of cast-iron, their axletrees should have copper-clouts underneath, to diminish the friction of the iron against the wood. Travelling-carriages are in many respects very unfit for garrison service, though they are frequently used.

Travelling-Carriages are such as guns are mounted on for sieges, and for the field; they are much longer, and differently constructed from garrison-carriages; having 4 wheels, 2 for the carriage, and 2 for the limber, which last are only used on marches.

Field-Carriages are both shorter and lighter than those before-mentioned, bearing a proportion to the pieces mounted upon them.

Limbers are two-wheel carriages, sometimes made with shafts, and sometimes with beams for drawing double; they serve to support the trail of *field carriages*, by means of the pintle or iron bolt, when artillery is transported from one place to another, and are taken off again when the pieces are to be fired, unless upon a march, when harrassed by the enemy, &c.

Galloper-Carriages serve for 1 1-2 pounders. These carriages are made with shafts, so as to be drawn without a limber. In the war of 1756, the King of Prussia, mounted light 3-pounders on these carriages, which answered very well. The horse-artillery is an improvement of this method of the Prussian.

Howitz-Carriages are for transporting howitzers; and those for the 6 and 5-8 inch howitzers, are made with screws to elevate them, in the same manner as the light 6-pounders; for which reason they are made without a bed, and the centre-transom must be 9 inches broad to fix the screw, instead of 4 for those made without: in the centre, between the trail and centre-transom, there is a transom-bolt, which is not in others, because the centre-transom must be made to be taken out; after which, the howitzer can be elevated to any angle under ninety degrees.

Tumbril-Carriage. See Tumbrel.

Block-Carriage, a carriage which is made from a solid piece of timber, hollowed out so as to receive the gun or howitzer into the cap-squares. The lower part of the cap-square is let into the solid wood, and the gun or howitzer is either elevated or depressed by a screw, as in other carriages. The limber for this carriage carries two large chests for ammunition, and takes four men. The pintle of the limber is so constructed as to receive the gudgeon of the carriage; by which means a greater relief is afforded when the carriage passes over rough ground.

Block-Carriages are also used by the horse-artillery as curricles. They are particularly useful on mountain service. The original inventor of them, is the British Colonel Congreve, author of many other important military inventions.

Truck-Carriages are to carry timber and other heavy burthens from one place to another, at no great distance: they serve also to convey guns or mortars upon a battery, whither their own carriages cannot go, and are drawn by men as well as horses.

Ponton-Carriage. Carriages of this kind are solely for transporting the pontons; they had formerly but two wheels, but are generally now made with four.—The making use of two-wheel carriages for travelling a great way, is contrary to sense and reason; because the whole weight lying upon the two wheels, must make them sink deeper into the ground, than those of a four-wheel carriage.

Carriage.—Weight of Field Carriages at present in use.

Horse Artillery Carriages	cwts.	qrs.	lbs.
12 Prs. gun and carriage complete for service, with two men, and their appointments on the limber, and 16 rounds of ammunition. - - - - -	45	0	14
Ammunition caisson for do. complete, with two men on the limber, and 1 spare wheel, 2 spare skafts, with 78 rounds of ammunition.	33	3	0
6 Prs. equipped as above with with 42 rounds -	34	1	21
Ammunition caisson as above, 108 rounds - - -	39	0	21
5 1-2 Inch howitzer, equipped as above, with 20 rounds	35	3	0
Ammunition caisson for do. as above, with 52 rounds	39	2	0
Forge waggon, complete for travelling - - -	19	2	14
Large tilted baggage waggon, empty - - - - -	18	3	0
Equipage to be carried - .	12	0	0

Park Carriages.	cwts.	qr.	lb.	cwts.	qr.	lb.
12 Prs. Med. gun carriage, without box.	16	1	21	42	0	7
Limber to do. -	7	2	14			
Gun - - -	18	0	—			
12 Pr. light gun	12	0	—	36	2	21
Carriage complete	12	3	7			
Limber, with em. box.	12	3	14			
6 Prs. Desaguliers	12	0	—	34	1	13
Carriage complete	11	0	14			
Limb. to do. em. box.	11	0	27			
6 Prs. light batt. gun	6	0	—	24	1	21
Carriage without box, iron axletrees	9	2	—			
Limber, with em. box.	8	3	21			
5 1-2 Inch howit. light	4	3	7	24	0	14
Carriage, without box.	10	0	7			
Limber, with em. box.	9	1	—			
24 Prs. platform travelling carriage	22	3	—	84	2	16
Standing carriage for do. iron trucks, and tackles of the carr.	13	3	16			
Iron gun - -	48	0	—			
Ball cartridge waggon, Duke of Richmond's pattern, with spare pole and swingle trees	16	1	17	36	1	1
Charge of musquet ammunition	20	0	—			
Common pattern ammunition caisson, altered - -	16	2	—	36	2	–
Charge of ammunition	20	0	—			
New infantry ammunition cart -	9	1	14	21	1	14
Charge of ammunition	12	0	—			
Common sling cart, complete				17	1	14
Common truck carriage -				12	2	21
Common hand cart - -				4	1	—
Forge waggon, complete -				13	2	14

Dimensions of certain parts of carriages, the knowlege of which may prevent many mistakes in arranging the different pieces for disembarkation, or in other similar situations.

Axletrees.—Most of the field carriages are now made with *iron* axletrees; the dimensions of which are as follows:

Iron Axletrees.	Dia. of the arm.		Len. of arm		
	At the shoulder	At the point.	Box, or nave part.	Washer part.	Total length to linchpin.
	in.	in.	in.	in.	inch
6 Pr. Light 3 Pr. Heavy 5 1-2 in. Howitz. Ammu. caisson Ball cartridge do. whether horse artillery or the park, whether limber or carriage	2¼	1¾	13	[illegible]	13[illegible]
Light 12 Pounder and limber	3¼	2¼	16	¾	16[illegible]
Medium 12 Pr.	3½	2½	16	¾	16¾
Limber to do.	[illegible]	2	[illegible]	[illegible]	13½

Wood Axletrees.	Carriage. Di. of arm. At Shoulder.	Carriage. Di. of arm. At Point.	Carriage. Length of Nave.	Limber. At Shoulder.	Limber. At Point.	Limber. Length of Nave.
	In.	In.	In.	In.	In.	In.
24 Prs. Heavy	7	4.9	18	6	3.3	16
12 Prs. Med.	6	4	16	6	4	12
6 Prs Des'rs.	5½	3½	13½	5½	3 1-2	13½
6 Prs. Light	5	3	13	5	3	13
3 Prs. Des'rs.	2-	1½		2-	1½	
3 Prs. Light						
How'r. 8 In.	6-		17	5-		15
——— 5 1-2 in.	5-		13	4½		11-
——— 4 2-5 in.	4-		12	4		10
		fore			hind	
Ammunition waggon, with folding sides	5	2.9	14	5	2.9	13
Close bodied Ammunition caisson	5	3.3	14	5	2.9	14

Dimensions and Weight of *Standing Gun Carriages*.

Kinds.	32		24		18		12		9		6	
	Ft.	in.	Ft.	in.	Ft.	in.	Ft.	in.	Ft.	in	Ft.	in.
Axletrees, length	4	9	4	7	4	3	3	9 1-2	3	6 1-2	3	4
Side pieces, length	6	4	6	0	5	9	5	6	5	3	5	0
Whole heighth to trunnion beds	2	9	2	7	2	6	2	3	2	1	2	0
	ct.	qr.	ct.	qr.	ct.	qr.	ct.	qr.	ct.	qr.	ct.	qr.
Weight of carriage, bed & coins	9	0	8	0	7	0	6	0	3	3	2	3

Carriages on a march. See MARCHING.

The carriages for horse artillery guns, as 12, 9, and 4 pounders, are constructed lighter than formerly; the two first of these calibres have an additional trunnion plate; and indeed it does not appear why every travelling carriage should not have this important improvement since it eases the horses and saves the carriage; and by lessening the fatigue increases the celerity of the movements, and spares the cattle for service.

For wood of which carriages are made, see the word WOOD.

CARRIER, a kind of pigeon, so called from its having been used in armies, to carry orders from one division of an army to another, or intelligence to some officer commanding a post or army at a distance.

CARRONADES. Their weight and dimensions

Kinds.	Diameter of Bores.	Length in ft.	Length in in.	Length in Calr.	Weight cwt.	Weight q.	Weight lb	Proportion between the shot and carronade.
68 Prs	8.05—	5	2	7.702	36	—	—	59 to 1
— —	—	4	0	5.962	29	—	—	
42 —	6.84—	4	3½	7.518	22	1	—	58 to 1
32 —	6.35—	4	0-	7.679	17	—	14	62 to 1
24 —	5.68	3	7-	7.656	13	—	—	56 to 1
		3	0	6.336	11	2	25	
18 —	5.16	3	3	7.587	9	—	—	56 to 1
		2	4	5.447	8	1	25	
12 —	4.52—	2	2	5.778	5	3	10	56 to 1

N. B. Carronades have not so much windage as guns. See WINDAGE.

RANGES with Carronades, 1798. The charge is 1-12th the weight of the shot; and with one shot and one wad. The line of fire from 6 to 9 feet above the level of the water.

Kinds.	68	42	32	24	18	12
Charge.	5lb. 8oz.	3lb. 8oz.	2lb. 1oz.	2lb.	1lb. 8oz.	1lb.
	Yards.					
P. Blank	450	400	330	300	270	230
1 Degree	650	600	560	500	470	400
2 ———	890	860	830	780	730	690
3 ———	1000	980	900	870	800	740
4 ———	1100	1020	970	920	870	810
5 ———	1280	1170	1087	1050	1000	870

Note.—The highest charge for carronades is 1-8th the weight of the shot; the lowest 1-16th.

Diameter of the wheels of the Field Carriages at present in use:

	Diameter. *ft.*	*in.*
All the horse artillery carriages, limbers, and caissons; the heavy 6 Prs. and long 3 Prs. and their limbers; the carriage of a 6 Pr. battalion gun, and a light 5 1-2 inch howitzer; the hind wheels of a common ammunition caisson	5	0

Diameter of the Wheels of Field Carriages, continued.

	ft.	in.
Limber to light 6 Pr. and 5 1-2 howitzer Med. 12 Pr.—limber, 4 ft. 6 in. carriage	4	8
Sling cart - - - - -	5	8
Fore wheels of an ammunition caisson	4	0
Pontoon carriage: Fore -	3	0
Pontoon carriage: Hind -	5	6
8 Inch Howitzer: Limber -	4	0
8 Inch Howitzer: Carriage -	5	0
Ball Ammunition Cart - -	5	0
24 Prs. Platform Carriage: Fore	4	0
24 Prs. Platform Carriage: Hind	4	2

Ranges with 8 inch shells, from 68 Pr. carronades.

Shells Weight.	Charge.	Flight.	Elevation.	First graze	Extreme range.
lb. oz. 43 11	3 lbs.	1 1-2	P. B.	302	1365
	3 —	—	5 deg.	1140	
	4 —	1 1-2	1 —	58	1843
	—	5	5 —	1137	1250
	—	—	11 1-2	1767	

To Carry *on the trenches.* See Trenches.

CART, in a military sense, is a vehicle mounted on two wheels, and drawn by one or more horses; of which there are several sorts, viz.

Powder-Carts, for carrying powder with the army; they are divided into 4 parts, by boards of an inch thick, which enter about an inch into the shafts. Each of these carts can only stow 4 barrels of powder. The roof is covered with an oil-cloth, to prevent dampness from coming to the powder.

Sling-Carts, used to carry mortars or heavy guns from one place to another at a small distance, but chiefly to transport guns from the water side to the proof-place, and from thence back again; as also to convey artillery to the batteries in a fortification; they have wheels of a very considerable diameter, and the guns or other heavy articles which they carry are slung in chains from the axle.

CARTE, is a thrust with a sword at the inside of the upper part of the body, with the nails of your sword hand upwards *Low carte*, is a thrust at the inside of the lower half of the body; the position of the hand being the same as in the former.

Carte-*blanche* Fr. a full and absolute power which is lodged in the hands of a general of an army, to act according to the best of his judgment, without waiting for superior instructions or orders. It likewise strictly means a blank paper; a paper to be filled up with such conditions as the person to whom it is sent thinks proper.

CARTEL, in military transactions, an agreement between two states at war for the exchange of their prisoners of war.

CARTOUCH, in military affairs, is a case of wood about 3 inches thick at bottom, bound about with marline, holding about 400 musquet balls, besides 8 or 10 iron balls of a pound each, to be fired out of a howitzer, for the defence of a pass, &c. See Grape Shot.

CARTOUCHES, in artillery, are made of leather, to sling over the shoulder of the matross, who therein carries the ammunition from the magazine or waggon, for the service of the artillery, when at exercise or on real service.

Cartouches *ou formules, Fr.* military passes which were given to soldiers going on furlough.

CARTRIDGE, a case of paper, parchment, or flannel, fitted to the bore of a piece, and holding exactly its proper charge. Musket and pistol cartridges are always made of strong paper, between 30 and 40 of which are made from 1 pound of powder, including their priming. Ball cartridges should be made of a different coloured paper to what is used for blank. The French musquet ball-cartridges are all capped with flannel. Cannon and howitzer cartridges are sometimes made of parchment, though more generally of flannel: the charges they contain are adapted to the service they are intended for.

Cartridges for cannon, are made with the best effect, when the flannel does not admit the leakage of powder; to effect this the flannels are first sewed to the size of a mandril or wooden roller; and the sewing completed, the end is tied, and hammered on the end of the mandril, the whole is then smeared with a coat of paste made of wheat flour and gum; and then drawn over, so that the pasted side may be inward; then set to dry, before filling they must be examined.

The experiment is worth the trial of making cartridges of cotton saturated with alum; its cheapness, its abundance, and easy formation, all recommend it. The alum would render it fire proof.

Cartridge-*Box*, a case of wood, made in a circular form, to wear before the body of the soldier, holding 24 or more musket-ball cartridges in rows: it is covered with leather, and worn upon a belt, both on duty, and on the day of battle. See POUCH.

The light infantry in the French service carry a cartridge box in front which covers the abdomen; and contains several rounds; some carry the cartridges on the side one above the other.

CARTRIDGES for guns.

Of Paper.	Weight of one Dozen.			Length.		Tonnage. No. packed ¾ Ton Vat.
Pounders.	lb	oz.	dr.	Ft.	in.	Number.
42 ———	3	0	0	2	4	1000
32 ———	3	0	0	2	4	1100
24 ———	3	0	0	2	4	1400
18 ———	2	14	0	2	4	1500
12 ———	2	4	0	2	4	1600
9 ———	2	4	0	2	4	1800
6 ———	1	5	0	2	0	2000
4 ———	1	1	0	1	7	2200
3 ———	1	1	0	1	7	2200
Of Flannel.						
42 and 32	2	2	0	2	3	The tonnage of flannel cartridges is 1-fifth more than that of paper.
24 Heavy	1	12	0	1	10	
24 Med.	1	6	0	1	5	
24 Light	1	1	8	1	0	
18 ———	1	6	0	2	3	
12 Heavy	1	3	0	1	6	
12 Med.	0	11	0	1	2	
12 Light	0	8	0	0	10	
9 ———	0	10	0	1	4	
6 Heavy	0	14	0	1	1	
6 Med.		—			—	
6 Light	0	5	0	0	9½	
3 ———	0	6	0	0	8	
13 in. Morts.	1	2	8	1	6	
10 ———	0	10	8	1	1-	
8 ———	0	7	0	1	0	
5 1-2 ———	0	4	0	0	9	
4 2-5 ———	0	3	0	0	7	
8 in. How'r	0	10	8	1	1-	
5 1-2 ———	0	4	8	0	9-	
4 2-5 ———	0	4	0	0	9-	

CARTRIDGES for small arms.

Kinds.	Powder contained in each Cartridge.	No. of each tied in one Bundle.	No. contained in one Barrel. Whole.	No. contained in one Barrel. Half.	Weight of one Barrel filled. Whole.			Weight of one Barrel filled. Half.		One Sheet of paper makes
	qrs.	No.	No.	No.	ct.	qr.	lb.	qr.	lb.	No.
Wall pieces	10	6	1400	500	2	2	19	3	24	
Musquet	6	10	2100	1000	1	3	10	3	24	6
Carbine	4	10	2853	1500	1	3	7	3	26	12
Do. pistol	3	10	4400	1500	1	3	17	3	21	16
Com. pistol	3	10		2000				3	11	24
7 bar. guns	1 1-2	14		1000 in kegs						24

Musquet CARTRIDGES, by different powers in Europe.

Weight of	English.	Hessian.	Austrian.	Dutch.	French.
	oz. dr. gr.	oz. dr. gr.	oz. dr. gr.	oz. dr. gr	oz. dr. gr.
Powder	0 6 0	0 7 10	0 6 13	0 10 10½	0 7 4 1-2
Cartridges, complete.	1 9 11	1 7 2	1 6 4	1 12 4	1 6 0

CASCABLE, in artillery, is the very hindermost knob or button of the cannon, or the utmost part of the breech. See CANNON.

CASCANS, in fortification, holes in the form of wells, serving as entrances to galleries, or giving vent to the enemy's mines. See FORTIFICATION.

CASEMATE, in fortification, a vault, or arch of mason-work, in that part of the flank of a bastion which is next the curtain, made to defend the ditch, and the face of the opposite bastion. See FORTIFICATION.

CASEMATES *nouvelles*, Fr. arched batteries which are constructed under all the openings of revetements or ramparts. The different forts at Cherbourg, are defended by these casemates: the works erected round Dover Castle, come likewise under this description; the works at fort Columbus, New York, are erected on the same principles.

CASERNES, in fortification, are buildings for the soldiers of the garrison to live in; generally erected between the houses of fortified towns, and the rampart.

CASERNES, in a general acceptation, signify barracks.

CASE-*Shot*. See SHOT, and LABORATORY.

CASHIERED. An officer sentenced by a general court-martial, or peremptorily ordered by the king, to be dismissed from the service, is said to be cashiered.

CASK, or CASQUE, the ancient helmet or armor for the head.

CASSINE, in military history, signifies a small house in the country, generally surrounded by a ditch. Cassines are very convenient to post small parties in, where they will be sheltered from any sudden attack, and can even make head till the nearest detachments can come and relieve them.

CASSIONS. See CAISSONS.

CASTING, in founding guns, implies the operation of running any sort of metal into a mould prepared for that purpose.

CASTLE, in military affairs, a fortified place, or strong hold, to defend a town or city from an enemy. English castles are for the most part no higher in antiquity than the Norman conquest; or rather about the middle of king Stephen's reign. Castles were erected in almost all parts of that kingdom, by the several contending parties; and each owner of a castle was a kind of petty prince, coining his own money, and exercising sovereign jurisdiction over his people. History informs us that 1017 castles were built in one reign.

CASTRAMETATION, is the art of measuring or tracing out the form of a camp on the ground; yet it sometimes has a more extensive signification, by including all the views and designs of a general; the one requires only the knowlege of a mathematician, the other the experience of an old soldier. The ancients were accustomed to fortify their camps by throwing up entrenchments round them. The Turks, and other Asiatic nations, fortify themselves, when in an open country, with their waggons and other carriages. The practice of the Europeans is quite different; for the surety of their camp consists in the facility and convenience of drawing out their troops at the head of their encampment; for which reason, whatever particular order of battle is regarded as the best disposition for fighting, it follows of course, that we should encamp in such a manner as to assemble and parade our troops in that order and disposition as soon as possible. It is therefore the order of battle that should regulate the order of encampment; that is to say, the post of each regiment in the line of battle should be at the head of its own encampment; from whence it follows, that the extent of the line of battle from right to left of the camp, should be equal to the front of the troops in line of battle, with the same intervals in the camp as in the line. By this means every battalion covers its own tents, and they can all lodge themselves, or turn out in case of necessity, at a minute's warning.

If the front of the camp is greater than the line, the troops must leave large intervals, or expose their flanks; if less, the troops will not have room to form with the proper intervals.

The front or principal line of the camp is commonly directed to face the enemy. See CAMP.

CAT *o' nine tails*, a whip with nine knotted cords, with which the British soldiers are punished. Sometimes it has only five cords. A barbarous and unmilitary usage, unknown in any other European army.

CATAFALCO, in military architecture, a scaffold of timber, decorated with sculpture, painting, &c. for supporting the coffin of a deceased hero, during the funeral solemnity

CATAPHRACT, the old Roman term for a horseman in complete armor.

CATAPHRACTA, in the ancient military art, a piece of heavy defensive armor, formed of cloth or leather, fortified with iron scales or links, wherewith sometimes only the breast, sometimes the whole body, and sometimes the horse too, was covered.

CATAPULTA, in military antiquity, an engine contrived for throwing of arrows, darts and stones, upon the enemy. Some of these engines were so large, and of such force, that they would throw stones of an hundred weight. Josephus takes notice of the surprising effects of these engines, and says, that the stones thrown out of them beat down the battlements, knocked off the angles of the towers, and had force sufficient to level a very deep file of soldiers.

CATATROME. See CRANE.

CATERVA, in ancient military writers, a term used in speaking of the Gaulish or Celtiberian armies, denoting a body of 6000 armed men. The word is also used to denote a party of soldiers in disarray; in opposition to *cohort* or *turma*, which signify in good order.

CATTUS, CATHOUSE, in ancient military history, was a kind of covered shed, sometimes fixed on wheels, and similar to the *Vinea* and *Pluteus* of the ancients.

CAVALCADE, in military history, implies a pompous procession of horsemen, equipages, &c. by way of parade, to grace a triumph, public entry, or the like.

CAVALIER, in fortification, is a work generally raised within the body of the place, 10 or 12 feet higher than the rest of the works. Their most common situation is within the bastion, and made much in the same form: sometimes they are placed in the gorges, or on the middle of the curtain; they are then made in the form of a horse-shoe. See FORTIFICATION. Their use is to command all the adjacent works and country round about it; they are seldom, or never, made but when there is a hill or rising ground, which overlooks some of the works.

Trench-CAVALIER, in the attacks, i

an elevation which the besiegers make by means of earth or gabions, within half-way, or two thirds of the glacis, to discover, or to enfilade the covert way.

CAVALRY, in military affairs, that body of soldiers which serves and fights on horseback: under this denomination are included,

Horse, that is, regiments or troops of horse. The first English troop of horse was raised in 1660.

Dragoons, are likewise regiments of horse, but distinguished from the former by being taught to fight both on foot and on horseback. The first English regiment of dragoons was raised in 1681. See *American Mil. Lib.* Art. CAVALRY.

Hunters. See LIGHT-HORSE.

Light-horse, are regiments of cavalry, mounted on light, swift horses, whose men are but small, and lightly accoutred. They were first raised by the British, in 1757.

Hussars, generally Hungarian horse; Their uniform is a large furred cap, adorned with a cock's feather; those of the officers, either with an eagle's or a heron's; a very short waistcoat, with a pair of breeches and stockings in one; short light boots, generally of red or yellow leather; with a curious doublet, having five rows of buttons, which hang loosely on the left shoulder. Their arms are a long crooked sabre, light carbines, and pistols. Before they begin an attack, they lay themselves so flat on the necks of their horses, that it is hardly possible to discover their force; but being come within pistol-shot of the enemy, they raise themselves with surprising quickness, and fall on with such vivacity, that it is very difficult for the troops to preserve their order. When a retreat is necessary, their horses have so much fire, and are so indefatigable, their equipage so light, and themselves such excellent horsemen, that no other cavalry can pretend to follow them; they leap over ditches, and swim over rivers, with a surprising facility. Most of the German powers have troops under this name, as also France; into which country they were originally introduced under Louis the XIII. and were called Hungarian cavalry. This description of cavalry was accordingly more ancient in the French service, than that of hussars.

CAVEATING, in fencing, implies a motion whereby a person in an instant brings his sword, which was presented to one side of his adversary, to the opposite side.

CAVIN, in military affairs, implies a natural hollow, sufficiently capacious to lodge a body of troops, and facilitate their approach to a place. If it be within musket-shot, it is a place of arms ready made, and serves for opening the trenches, free from the enemy's shot.

CAUTION, an explanation given previous to the word of command, by which the soldiers are called to attention, that they may execute the movement to be directed with unanimity and correctness.

CAZEMATTE. See CASEMATE.

CAZEMATE, CASEMATE, in fortification, is a certain retired place in the flank of a bastion, for the defence of the ditch, and face of the opposite bastion; not used at present. It also implies a well, having several subterranean branches, which are extended when they suspect the enemy is forming a mine, till they hear the miners at work.

CAZERNES, *Fr.* See CASERNES.

CEINTURE *militaire*, Fr. a broad leather belt which was worn round the waist, and was ornamented with gold or silver plates.

CELERES, the life-guards which attended Romulus, in the infancy of Rome, were so called. They were laid aside by Numa Pompilius. Celeres are properly distinguished from other troops, by being lightly armed and acting always on foot. The Celeres cannot be considered under the same head as Velites.

CEMENT. See CÆMENT.

CENOTAPH, in military history, implies the empty tomb of a hero, or a monument erected to the honor of a person, without the body of the deceased being interred in or near it.

CENTESIMATION, in ancient military history, a mild kind of military punishment, in cases of desertion, mutiny, and the like, when only every 100th man was executed.

CENTER, CENTRE, in a general sense, signifies a point equally distant from the extremities of a line, surface, or solid.

CENTRE *of a battalion*, on parade, is the middle, where an interval is left for the colors; of an encampment, it is the main street: and on a march, is an interval for the baggage, &c.

CENTRE *of a bastion*, is a point in the middle of the gorge of the bastion, from whence the capital line commences, and which is generally at the inner polygon of the figure.

CENTRE *of gravity*, in military mechanics, is that point about which the several parts of a body exactly balance each other in any situation.

CENTRE *of a conic section*, is the point where all the diameters meet.

CENTRE *of an ellipsis*, is that point where the transverse and conjugate diameters intersect each other.

CENTRE *of motion*, is that point which remains at rest while all the other parts of the body move about it.

CENTRE *of percussion*, is that point in which the force of the stroke is the greatest possible. When the moving body revolves round a fixed point, the centre of percussion is the same with the centre of oscillation, and found by the same method; but when the body moves in a parallel direction, the centre of percussion is the same with the centre of gravity.

CENTINEL, } is a private soldier
CENTRY, } from the guard, posted upon any spot of ground, to stand and watch carefully for the security of the guard, or of any body of troops, or post, and to prevent any surprise from the enemy. All centinels are to be very vigilant on their posts; neither are they to sing, smoke, or suffer any noise to be made near them. They are not to sit down, lay their arms out of their hands, or sleep; but keep moving about on their posts during the two hours they stand, if the weather will allow of it. No centry to move more than 50 paces to the right, and as many to the left of his post, and let the weather be ever so bad, he must not get under any other cover, but that of the centry box. No one to be allowed to go from his post without leave from his commanding officer; and, to prevent desertion or marauding, the centries and vedettes must be charged to let no soldier pass.

CENTINEL *perdu*, a soldier posted near an enemy in some very dangerous post, where he is in perpetual danger of being shot or taken.

CENTRY-*box*, a sort of box, or hut, to shelter the centinel from the injuries of the weather; in fortifications they are sometimes made of masonry, and of stone, in a circular form.

CENTURION, a military officer among the ancient Romans; who commanded an *(centum)* hundred men. The term is now obsolete. It answers to the modern captain of a company.

CENTURY, in a military sense, means a hundred soldiers, who were employed in working the battering-ram.

CERCLE, *Grand-cercle*, Fr. a form observed under the old government of France, by which it was directed, that every evening at a specific hour the serjeants and corporals of a brigade should assemble to receive orders; the former standing in front of the latter. Subsequent to the grand cercle, a smaller one was made in each regiment, when general, or regimental orders were again repeated to the serjeants of each regiment, and from them communicated to the officers of the several companies.

CERTIFICATES, are of various kinds, as applied to officers generally, or to commissaries, commanding officers, or staff. They are a testimonial bearing witness to the existence of some requisite qualifications, or to the performance of some act required by the regulations of the army, and for which the officer who signs is responsible, whether he certifies for himself, or for any other officer,

Military CERTIFICATES are of various denominations, and consist chiefly of the following kinds, viz.

Certificate from a field officer to the commander in chief, affirming the eligibility of a young man to hold a commission.

Certificate of an officer in the English army upon honor, that he does not exceed the regulation in the *purchase of his commission.*

Certificate from a general officer to affirm and prove the losses which officers may sustain in the field.

Certificate from colonels of regiments to the board for admission of proper objects to the hospital.

Certificate from a magistrate to identify the person of a recruit, and to affirm, that he has enlisted himself voluntarily into the service; likewise, that the articles of war have been read to him.

Certificate from regimental surgeons, whether men when they join are proper and fit objects to be enlisted; this is required in the United States army, to be on the back of every paper of enlistment.

Certificate of commanding officers for stores, &c.

Certificate, to enable an officer to receive half pay.

Certificate of surgeons and assistant surgeons, to prove their having passed a proper examination.

CESSATION, or *cessation of arms*, in a military figurative sense, means a truce, or the total abrogation of all military operations for a limited time.

CHACE *of a gun*, means the length from the trunnions to the muzzle. See CANNON.

CHAFFERY, that part of the foundry where the forges are placed for hammering iron into complete bars, and thereby bringing it to perfection.

CHAIN *for engineers*, is a sort of wire chain divided into links of an equal length, made use of for setting out works on the ground, because cord lines are apt to shrink and give way.

There are several sorts of chains made use of in mensuration; as Mr. Rathbone's, of two perches in length; others, one perch long; some of 1000 feet in length; but that which is most in use amongst engineers is Mr. Gunter's, which is 4 poles long, and contains 100 links, each link being 7 92-100 inches in length.

CHAIN-*shot*. See SHOT.

CHALLENGE, a cartel, or invitation to a duel, or other combat; it may with propriety be called a provocation, or summons to fight, when an affront in derogation of honor has been offered.

CHALLENGE is also a term applied to an objection made against any member of a court-martial, on the score of real or presumed partiality. The prisoner, however, in this case, must assign his cause of challenge; of the relevancy, or validity of which the members are themselves the judges; so that peremptory challenges, though allowed in civil cases, are not acknowledged in military law The privilege of challenging belongs equally to the prisoner and the prosecutor.

CHAMADE, in a military sense, means a signal made by the enemy, either by beat of drum, or sound of trumpet, when they have any matter to propose; such as to bury their dead, &c. See PARLEY.

CHAMBER *of a cannon*, in artillery, that part of the bore of a cannon which receives the powder with which it is charged. See CANNON.

CHAMBER *of a mortar*, the space where the powder lies, and generally of several forms and dimensions, such as the conic, spheric, cylindric, parabolic, and concave, or bottled chambers. See MORTARS.

In 1787 and 1789 experiments were made at Woolwich with an 8 inch mortar, with four shifting chambers, to ascertain which form gives the longest range.

The chambers were all of the same capacity, viz. 63.7 cubic inches, and contained two pounds of powder. Their forms were:

1st. Common conical chamber with the circular bottom.

2d. The same reversed.

3d. The cylindric chamber with circular bottom.

4th. The spheric chamber.

The ranges were the medium of 6 rounds; from them it appears, that when the spheric chamber is filled with powder, it has the advantage in point of range; but when smaller charges are used, its ranges are found to be shorter than those of other forms. The conical (No. 1.) chamber of the present British establishment gives the longest range under other circumstances.

CHAMBER *of a mine*, that place where the charge of powder is lodged, to blow up the works over it. See MINE.

CHAMBER *of a battery*, is a place sunk under ground for holding powder, loaded shells, and fuzes, where they may be out of danger, and preserved from rain or moisture.

CHAMBRER, *faire chambrée*, a military phrase among the French, to signify several persons lodged in the same room, barrack, or tent.

CHAMP *de bataille*, Fr. field of battle; the ground on which two armies meet.

CHAMP *de Mars*, the field of Mars, an open place in the neighborhood of Paris, where troops are frequently reviewed and in which the public festivals have been held.

CHAMPION, he who undertook to settle the difference of contending armies, by single combat.

CHANDELIERS, in military affairs, a kind of moveable parapet, consisting of wooden frames, on which fascines are laid to cover the workmen when at work on the trenches. They are made of various sorts and sizes, according to the use they are for.

CHANTIER, *Fr.* a square piece of wood, which is used for the purpose of raising any thing. It serves to place barrels of gunpowder in a proper manner, and frequently to try pieces of ordnance instead of frames.

CHAPE, the metalline part put on the end of a scabbard, to prevent the point of the sword or bayonet from piercing through it.

CHAPELET, *Fr.* a piece of flat iron with three tenons or ends of timber, which is fixed to the end of a cannon.

CHAPITEAU, *Fr* two small boards which are joined together obliquely, and serve to cover the touch-hole of a piece of ordnance.

CHAPPE, *Fr.* a barrel containing another barrel, which holds gunpowder. It likewise means a composition of earth, horse dung, and wad, that covers the mouth of a cannon, or mortar.

CHARACTER, in a general sense, implies any mark used for representing either ideas, or objects.

Military CHARACTERS, } are certain marks invented for avoiding prolixity,
Mathematical CHARACTERS, }

and more clearly conveying the thoughts of the learned in those sciences to beginners; the chief of which are as follow:

+ in algebra is the sign of the real existence of the quality it stands before, and is called an affirmative, or positive sign. It is also the mark of addition, and signifies, that the numbers, or quantities on each side of it are added together.

— This is the note of negation, negative existence, or non-entity. It is the sign of subtraction, and signifies, that the numbers, or quantities which come after it, are to be taken from the numbers, or quantities which stand before it. As + signifies a *positive* or *affirmative* quantity, or *absolute* number, so — signifies a *fictitious* or *negative* number or quantity. Thus — 3, is 8 times less than nothing. So that any number or quantity with the sign + being added to the same number, or quantity with the sign —, their sum will be equal to nothing. Thus 8 added to — 8 is equal to 0, but — 8 taken from + 8, is equal to 16.

× is the sign of multiplication. It signifies *into*, or *multiplied by*.

÷ is the mark of division, and signifies, that the numbers, or quantities before it are to be divided by the numbers after it.

= are the signs of equality, and signify, that the quantities and numbers on the one side of it are equal to the quantities and numbers on the other.

√ is the sign of radicality, and shews (according to the index of the power that is set over or after it) the square, cube, or other root, that is extracted, or is to be so, out of any quantity.

∛ is the sign of the cube root, and signifies the extraction of it, as in the square root above.

∺ is the sign of continued, or geometrical proportion.

: : is the mark of geometrical proportion disjunct, and is usually placed between two pair of equal ratio's; as 3 : 6 : : 4 : 8, shews, that 3 is to 6, as 4 is to 8. Or *a* : *b* : : *d* : *e*, and are thus read, as *a* is to *b*, so is *d* to *e*, &c.

> or ⊏ are signs of majority; thus $a > b$ expresses that *a* is greater than *b*.

< or ⊐ are signs of minority; and when we would denote that *a* is less than *b*, we write $a < b$, or *a* ⊐ *b*, &c.

± signifies *more*, or *less such a quantity*, and is used often in the extraction of roots, completing of squares, &c.

Artillery-CHARACTERS, most generally used, are as follow:

C. qr. lb. which signifies centners, or hundreds of 112 pounds, *qr.* quarters of 28 pounds, *lb.* pounds of 16 ounces avoirdupois. Thus a piece of artillery with 14 *c.* 3 *q.* 16 *lb.*, is 14 hundred, 3 quarters, and 16 pounds.

Pr. signifies pounder. Thus 24 *pr.* is a 24 pounder.

T. C. qr. lb. signifies tons, hundreds, quarters, pounds; and 28 *lb.* is one quarter: 4 *qr.* is one centner, or 112 pounds; and 20 *C.* or *cwt.* is one ton.

lb. oz. dr. means, pounds, ounces and drams: 16 *dr.* is one ounce, and 16 *oz.* is one pound avoirdupois.

lb. oz. dwts. gr. is pounds, ounces, penny-weights, and grains; of which 24 *gr* make one penny-weight, 20 *dwt.* make one ounce, and 12 *oz.* one pound of troy-weight.

CHARACTERS in fire-works, are the following.

M	Meal-powder.
∋	Corned powder.
⊖	Saltpetre.
Z	Brimstone.
CZ	Crude Sulphur.
C +	Carbon or charcoal.
CS	Sea-Coal.
BR	Beech raspings.
S ×	Steel or iron filings.
B ×	Brass-dust.
G ×	Glass-dust.
T ×	Tanners dust.
CI	Cast-iron.
CA	Crude antimony.
⚹	Camphor.
AY	Yellow amber.
LS	Lapis calaminaris.
Ⓖ	Gum.
BL	Lamp-black.
GI	Ising-glass.
W	Spirit of wine.
ST	Spirit of turpentine.
PO	Oil of spike.

CHARACTERS, used in the arithmetic of infinites, are dots over letters, denoting the character of an infinitesimal, or fluxion. Thus the first fluxions of *x*, *y*, *z*, being marked thus, $\dot{x}, \dot{y}, \dot{z}$; the second are $\ddot{x}, \ddot{y}, \ddot{z}$, and the third $\dddot{x}, \dddot{y}, \dddot{z}$.

Geographical CHARACTERS, are °, ′, ″, ‴, &c. which signify degrees, minutes, seconds, thirds. Thus 40°, 55′, 18″, 55‴, is read 40 degrees, 35 minutes, 18 seconds, 55 thirds. It is also used in the elevation of pieces of artillery.

Characters. See GUNPOWDER.

CHARBON, See AIGREMORE.

CHARGE, *Fr.* The French technically use this term in two different senses, viz. *charge precipitée* and *charge à volonté*. *Charge precipitée* is given when the four times are expressly marked, as *chargez vos arms*, *un*, *deux*, *trois*, *quatre*; and applies chiefly to the drill. *Charge à volonté* is executed in the same manner as the *charge precipitée*, with this difference, that the soldiers do not wait for the specific words.

CHARGES for field guns.

			lbs.
42 Prs. med and heavy		for Rnd. Shot	4
		Case	3½
12 Prs. Light	-	Round Shot	3
		Case	3
6 Prs. Desaguliers		Round Shot	2¼
		Case	2
6 Prs. Medium	-	Round Shot	2
		Case	
6 Prs. light	-	Round Shot	1½
		Case	1¼
3 Prs. Heavy	-	Round Shot	1
		Case	
3 Prs. Light	-	Round	12 oz.

The charge for battering guns is one third the weight of the round shot, for round shot, and one fourth of it for case shot.

The charge for carronades is usually one twelfth the weight of the shot. The highest is one eighth, and the lowest one sixteenth.

By the experiments made at Woolwich in March 1801, it is recommended, that when cylinder powder is used on service, the charges of field ordnance with round shot, shall be reduced to the usual quantities for case shot. The same experiments recommend, that the thickness or length of the wood bottom be varied, in order to change the position of the shot, and thereby save the bore; and that the paper cap which is usually thrown away on service, shall be put over the shot before it is introduced into the piece.

For charges for small arms see the word CARTRIDGES.

Charges of French guns in French weights.

		lbs.		
24 Prs.	-	8	Siege	
16 Prs.	-	5½		
12 Prs.	-	4	Field	¼ less for Case Shot.
8 Prs.	-	2½		
4 Prs.	-	1½		

Charge *de mine*, Fr. the disposition of a certain quantity of powder, which is used for the explosion of a mine.

CHARGE, in gunnery, implies the quantity of powder, shot, ball, shells, grenades, &c. with which a gun, mortar, or howitzer, is loaded.

Charges for heavy guns from a 42-pounder to a 3 pounder, both brass and iron, in proof, service, saluting, and ricochet.

Kinds.	Proof.		Service.		Saluting.	Ricochet.
	Brass.	Iron.	Brass.	Iron.		
Prs.	lb. oz.	lb. oz	lb. oz	lb. oz.	lb. oz.	lb. oz.
42	[illegible] 8	[illegible]	14 [illegible]	12 [illegible]	10 [illegible]	3 4
3[illegible]	[illegible] 12	[illegible] 8	1[illegible] 10	9 4	8 [illegible]	2 12
24	[illegible]	18 0	8	8 0	6 0	[illegible] 0
18	18 0	15 0	6 0	8 0	4 8	1 12
12	12 0	12 0	4 0	4 0	3 [illegible]	1 6
9	9 0	9 0	[illegible] 0	3 0	2 8	1 4
6	6 6	6 0	2 8	2 8	[illegible] 0	1 0
3	3 0	3 0	1 0	1 0	0 12	0 6

Charges for Medium Guns.

	Proof.		Service.		Saluting.	Ricochet.
	Brass.	Iron.	Brass.	Iron.		
Prs.	lb. oz.	lb. oz.	lb. oz.	lb. oz.	lb. oz.	lb. oz.
24	18 0	18 0	8 0	8 0	4 0	1 12
12	9 0	9 0	3 8	0 0	2 8	1 4
6	6 6	6 0	2 0	2 4	1 4	1 12
3	3 0	3 0	1 0	1 0	0 14	0 8

Charges for light Guns.

	Proof.		Service.		Saluting.	Ricochet
	Brass.	Iron.	Brass	Iron.		
Prs.	lb. oz.	lb. oz.	lb. oz.	lb. oz.	lb. oz.	lb. oz.
24	10 0	5 0	5 0	0 0	4 0	1 12
12	6 0	0 0	3 0	0 0	2 8	1 4
6	3 0	0 0	1 8	0 0	1 4	0 12
3	1 8	1-12	0 12	0 0	0 14	0 8

As pieces of artillery are of various denominations, and consequently made use of on several occasions, their charges must of course have many variations.

Charge, is also the attack of cavalry; and *charge bayonet* is a word of command given to infantry, to force the enemy whom they are to charge at the point of the bayonet. *To sound a charge*, is the sound of the trumpet as a signal for cavalry to begin the attack.

Charge, in military law, is the specification of any crime, or offence for which a non-commissioned officer or soldier is tried before a court martial. In all charges of this nature, the time and place, when and where the crime, or offence was committed, must be set forth with accuracy and precision.

Charged *Cylinder*, in gunnery, implies that part of the chace of a gun, which contains the powder and ball.

Charger, any horse belonging to an officer on which he rides in action.

Chargers are also either bandoliers, or little flasks that contain powder for charge or priming.

CHARIOT, a car, in which men of arms were anciently placed. These were armed with scythes, hooks, &c. The person who drove the chariot was called the *charioteer*.

CHARPENTIER, *Fr.* a carpenter.

CHART, or *sea*-**Chart**, is a hydrographical map, or a projection of some part of the earth's superficies in plano, for the use of navigators and geographers.

Plane-**Chart**, is a representation of some part of the earth's superficies of the terraqueous globe, in which the meridians are supposed parallel to each other, the parallels of latitude at equal distances, and consequently the degrees of latitude and longitude every where equal to each other.

Chart *of reduction*, is that where the meridians are represented by right lines, inclining towards each other; thence it appears by construction, that these charts must correct the errors of the plane ones. But since these parallels should cut the meridians at right angles, and do not, they are defective, inasmuch as they exhibit the parallels inclined to the meridians.

Mercators-**Chart**, is that where the meridians are straight lines parallel to each other, and equidistant: these parallels are also straight lines, and parallel to each other; but the distance between increases from the equinoctial towards each pole, in the ratio of the secant of the latitude to the radius.

Globular-**Chart**, a meridional projection, wherein the distance of the eye from the plane of the meridian, upon which the projection is made, is supposed to be equal to the sine of the angle of 45 degrees. This projection comes the nearest of all to the nature of the globe, because the meridians therein are placed at equal distances.

Chorographic-Charts, are descriptions of particular countries.

Heliographic-Charts, descriptions of the body of the sun, and of the maculæ or spots observed in it.

Selenographic-Charts, particular appearances of the spots of the moon, her appearance and maculæ.

Telegraphic-Charts, are descriptions of the telegraph on paper.

Topographic-Charts, are specific delineations of military positions, in any given tract of country. Companies of topographers have been formed among the French, for the purpose of accurately and expeditiously pointing out to generals and commanding officers, all the relative points of locality, &c. See *American Mil. Lib.* article Reconnoitring.

GHASE *of a gun*. See Chace.

To Chase *the enemy*, means to march after them on horseback in full speed. To pursue a ship at sea.

CHASSEURS. The French light infantry, answering to the American *riflemen* and German *yagers*, are called *chasseurs a pied;* they have also *chasseurs a cheval.* The word means literally a *hunter*.

CHAT, *Fr.* a piece of iron having one, two or three very sharp prongs, or claws; arranged in a triangular shape, when it has three prongs. This piece of iron is fixed to a shaft. It is used in the examination of a piece of ordnance, and by being introduced into the bore, shews whether it be honey-combed, damaged, or otherwise defective.

There is another species of *Chat* which differs a little from the one we have just described. It consists of two branches of iron, that are fixed to the end of a piece of the same metal, and have, each of them two steel prongs or claws. One of these branches contains a hinge with a spring so fixed, that when the *chat* is put into the bore, the least cavity releases the spring, and the defect is instantly discovered. Master Founders, who by no means like the invention, call the common chat *Le Diable*, the devil; and they distinguish the one with two branches, by terming it *la màlice du diable*, the malice of the devil.

CHATTER *les pieces*, Fr. to search, to probe, or examine pieces of ordnance with a chat, in order to discover whether there are any defects within the bore of a cannon.

CHAUDIERES, *Fr.* are vessels made use of in military magazines, to boil pitch in, for various purposes.

CHAUFFE, *Fr.* a spot where the wood is collected and burnt in a foundry. The *chauffe* stands three feet under the side of the furnace, the flames which issue from it, spread over every part of the inside of the furnace, and by their intense heat dissolve the metal.

Chausse-*Trapes*, Fr. are what we call *crows-feet*, they consist of nails with 4 or 5 points, of which one always stands upwards above the level of the ground; each point is 2, 3, 4 or 5 inches long. They are usually fixed in different parts of a breach, or in any place which is accessible to cavalry; to prevent its approach: sometimes they are of use to obstruct the passage of cavalry through the streets of towns.

Chaussee, or *Rès de* Chaussee, an old expression for the level of the field or the plain ground.

CHEEKS, a general name among mechanics, for those pieces of timber in their machines, which are double and perfectly corresponding to each other. In the construction of military carriages, &c. the term is used to denote the strong planks which form the sides of gun carriages.

CHEF, *Fr.* Chef has various significations in the French service. With regard to private soldiers, it serves to mark out the corporal or oldest soldier, who has the management of their provisions in quarters, or in the field; this person was called *chef de chambrée.* A chef de chambrée among the Romans, was called a decanus, whence our church deacon.

Chef *d' escadre*, Fr. a general officer, who commands any part of an army, or division of a fleet. His duty in the sea-service is nearly the same as that of a commodore or a brigadier general on shore. *Chefs d' escadre* sit upon all general courts-martial, and rank according to the dates of their commissions.

Chefs *de files*, Fr. the front rank of a battalion, consisting generally of the best and bravest soldiers. When an engagement takes place, par file, by files, as in the action of riflemen, the order of the battalion is necessarily changed; that which was rank becomes file, and what was file becomes rank.

CHELSEA HOSPITAL, a noble edifice which was built by Charles the 2d of England on his restoration, and afterwards improved by his successor James the 2d. Non-commissioned officers and private men, who have been wounded or maimed in the service, are entitled to the benefit of this hospital. There are in and out-pensioners belonging to the establishment, and the provisions of it extend to the militia under the following restrictions: serjeants who have served fifteen years, and corporals or drummers who have served twenty, may be recommended to the bounty. Serjeants on the establishment may likewise receive that allowance, with their pay in the militia. But serjeants who have been appointed subsequent to the passing of the 26th of George the 3d, are not entitled to it under twenty years service.

CHEMIN-*Couvert.* See Covert-way.

Chemin *des rondes*, in *fortification*, a space between the rampart and low parapet under it, for the rounds to go about it.

CHEMISE, *Fr.* an obsolete term to signify the revetement made of brick work, which was formerly constructed to secure works made of earth, especially those that were formed of sandy soil, and would necessarily require too large a talus to support the weight. The modern term is *ouvrage revetu, place revetüe.*

Chemise *de feu*, Fr. a French sea-term, to signify several pieces of old sails of various sizes, which after they have been pitched, and thoroughly soaked in other combustible matter, such as oil of petrol, camphor, &c. may be nailed to an enemy's ship on boarding her, and when set fire to, will consume the same.

Chemise *de maille*, Fr a shirt of mail, or body lining made of several scales or iron rings, which was worn under the coat to protect the body of a man

CHEMISTRY, the art of examining bodies, and of extracting from them any of their component parts; a science of the first importance to military men; it opens to the mind so many sources of knowlege applicable to military uses.

CHESS, a nice and abstruse game, supposed to have been invented during the siege of Troy. This game is particularly adapted to military capacities.

CHEVAL *de Bois*, Fr. a wooden-horse, a military chastisement, which prostitutes who followed the French army, were subject to undergo, by exposing them, we presume, on a wooden-horse.

CHEVALER, in the manege, is said of a horse, when, in passing upon a walk or trot, his off fore leg crosses the near fore leg every second motion.

CHEVALET, *Fr.* a sort of bell-tent, formerly used in the French service, when an army encamped. It resembled in some degrees the wigwam of the Indian.

CHEVALIER, in a *general sense*, signifies a knight or horseman.

CHEVAUX-*de frize*, in *fortification*, a large joist or piece of timber, about 5 or 6 inches square, and 10 or 12 feet in length; into the sides whereof are driven a great number of wooden pins, about 6 feet long, and 1 1-2 inch diameter, crossing one another at right angles, and pointed with iron. They are used on numberless occasions, as to stop up breaches, to secure avenues to a camp from the inroads both of horse and foot. They are sometimes mounted on wheels, with artificial fires, to roll down in an assault, &c. They were first used at the siege of Groningen, in 1658.

Chevaux-*de-frize.* The *body* or *beam* of a chevaux-de-frize is generally made 9 feet long, and 6 inches square, and weighs 41 lbs. The *spears* are 33 in number, weighing 2 lb. each. are 5 feet long, and 1 1-4 inches square. They are placed 9 1-2 inches asunder.

CHEVET, *Fr.* a small wedge which is used in raising a mortar, it is placed between the frame and swell of the mortar.

CHEVISANCE, *Fr.* enterprize, feat, or atchievement.

CHEVRE, *Fr.* a crab or gin. See Chevrette.

CHEVRETTE, a kind of gin. Among the many inventions for raising guns or mortars into their carriages this engine is very useful; it is made of two pieces of wood about four feet long, standing upright upon a third, which is square: they are about a foot asunder, and parallel; pierced with holes opposite one another, to hold a strong bolt of iron, which may be raised higher or lower at pleasure: it may be used with a hand-spike, which takes its poise over this bolt, to raise any thing by force.

CHEVROTINES, *Fr.* leaden bullets of small calibre; there are generally sixty to a pound weight.

CHIEF *or* **Chieftain**, the head leader, or commander of any clan in time of war, was so called, especially among the Scotch.

CHIORME, *Fr.* the crew of galley slaves and bonavogliers or volunteers.

CIMIER, *Fr.* a heavy ornament, which the ancient knights or chevaliers in France and in other countries were accustomed to wear upon their helmets; small figures were afterwards substituted in their stead.

CHOROGRAPHY, in *engineering*, is the art of making a drawing or map of a country, province or district.

CIMETAR, See Scimitar.

CINQUAIN, in *ancient military history*, was an order of battle, to draw up 5 battalions, so that they might make 3 lines; that is, a van, main-body, and reserve. Supposing the 5 battalions, to be in a line, the 2d and 4th advance and form the van, the 3d falls back and forms the rear, the 1st and 5th form the main body upon the same ground. Lastly, every battalion ought to have a squadron of horse on both the right and left wings. Any number of regiments, produced by multiplying by 5, may be drawn up in the same manner.

CIRCLE, in *mathematics*, is a plane figure, comprehended under one line only, to which all right lines drawn from a point in the middle of it are equal to one another

CIRCUMFERENTER, an instrument used by engineers for measuring angles.

CIRCUMVALLATION, or *line of circumvallation*, in *military affairs*, implies a fortification of earth, consisting of a parapet and trench, made round the town intended to be besieged, when any molestation is apprehended from parties of the enemy, which may march to relieve the place.

Before the attack of a place is begun, care is to be taken to have the most exact plan of it possible; and upon this the line of circumvallation and the attack are projected. This line, being a fortification opposed to an enemy that may come from the open country to relieve the besieged, ought to have its defence directed against them; that is, so as to fire from the town: and the besiegers are to be encamped behind this line, and between it and the place. The camp should be as much as possible out of the reach of the shot of the place; and the line of circumvallation, which is to be farther distant from the place than the camp, ought still more to be out of the reach of its artillery.

As cannon are never to be fired from the rear of the camp, this line should be upwards of 1200 fathoms from the place: we will suppose its distance fixed at 1400 fathoms from the covert way. The depth of the camp may be computed at about 30 fathom, and from the head of the camp to the line of circumvallation 120 fathoms, that the army may have room to draw up in order of battle at the head of the camp, behind the line. This distance added to the 30 fathoms, makes 150 fathoms, which being added to the 1400, makes 1550 fathoms constitute the distance of the line of circumvallation from the covert-way. The top of this line is generally 12 feet broad, and 7 feet deep: the parapet runs quite round the top of it; and at certain distances is frequently strengthened with redoubts and small forts; the base 18 feet wide, the height within 6, and on the outside 5 feet, with a banquette of 3 feet wide, and 1 1-2 high. See Contravallation, or Countervallation.

CIRCUS, in *military antiquity*, a very capacious building, of a round or oval form, erected by the ancients for exhibiting shews to the people.

CISEAUX, *Fr.* chissels made use of by miners, to loosen earth from the sides of the excavation, without making a noise, which the miner effects by striking the handle.

CITADEL, is a fort with 4, 5, or 6 bastions, raised on the most advantageous ground about a city, the better to command it; and commonly divided from it by an esplanade, the better to hinder the approach of an enemy; so that the citadel defends the inhabitants if they continue in their duty, and punishes them if they revolt. Besiegers always attack the city first, that, being masters of it, they may cover themselves the better against the fire of the citadel. Its having bastions distinguishes it from a castle. Sometimes the citadel stands half within, and half without the ramparts of the place.

CIVIC-CROWN, among the ancient Romans, was a crown given to any soldier who had saved the life of a citizen. It was composed only of oaken boughs, but accounted more honorable than any other.

CIVIERE, *Fr.* a small hand-barrow, which is carried by 2 men, and is much used by the artillery.

CLARENCIEUX, a silly pageant which has survived the feudal and heraldic ages, and kept up for shew in the court of England, he is called the second king at arms, from the duke of Clarence, third son of king Edward III.

CLARIGATION, in *Roman antiquity*, a ceremony which always preceded a formal declaration of war. It was performed in the following manner: the chief of the heralds went to the territory of the enemy; where, after some solemn prefatory indication, he, with a loud voice, intimated, that he declared war against them for certain reasons specified; such as injury done to the Roman allies, or the like.

CLAN, a term used among the Scotch for a number of families subject to one head, or chief, who led them to war. The word is *claöwn* Celtic signifying *Children*.

CLATES.
CLAYES. } See Hurdles.

CLAYONAGES, *Fr.* a species of hurdle, with which the timber work of a gallery is covered. It is likewise used in saps.

CLEAR, to clear the trenches. See Trenches.

CLERK, in the general acceptation of the term, a writer in a public office; military departments have persons of this description. See *Regimental* Book.

CLOCHE, *Fr.* a bell.

CLOTHING. Clothing of the army of the United States is provided under the order of the war department, by a purveyor of public supplies, who buys and sees the clothing made; it is then placed in the military stores and issued upon order. The clothing of the British army is determined by a permanent board, composed of the commander in chief, and a certain number of general officers, who act under the king's immediate authority: The annual clothing of the infantry of the line, or fencible infantry, serving in Europe, in North America, or at the Cape of Good Hope, (Highland corps excepted) consists in a coat, waistcoat, or waistcoat front, a pair of breeches, unlined, except the waistband, and with one pocket only: a cap made of felt and leather, with brass plate, cockade and tuft. The felt crown of the cap, cockade, and tuft to be supplied annually, the leather part and brass plate, every two years. Two pair of good shoes, of the value of 5*s.* 6*d* each pair, are to be supplied annually in lieu of the half mounting, and each serjeant is to be credited with the sum of 3*s.* being the difference between the value of the former articles of half mounting for a serjeant and private man. Some exceptions are made with respect to highland corps, and regiments serving in the East and West Indies.

CLOY, or *to cloy guns*. See *To* Nail.

CLOU, *Fr.* See Nails.

CLOUTS. See Axle-tree.

To **CLUB** *a Battalion* implies generally a temporary inability in the commanding officer to restore any given body of men to their natural front in line or column. This occurs after some manœuvre has been performed, and is occasioned by false directions being given to the different component parts. Ignorant and inexperienced officers may frequently commit this error; sometimes however, the circumstance may arise from an erroneous movement of a division or company, notwithstanding that the word of command was correct. An able officer in that case will instantly know how to unravel the several parts. The less informed and the less capable may find a relief in sounding the *disperse*, which see. It does not, however, always follow, that because an officer may occasionally commit this error with respect to the minute movements of a battalion, he must therefore be unequal to the superior functions of command; or that when a man, who has risen from the ranks, is perfectly master of the mechanical arrangement of inferior movements, he should be able to act upon the enlarged scale of locality and position. The military science which is required in each of these cases essentially differs in its appropriate exercise, but both are necessary. In the confusion of a manœuvre, the best mode would be to halt those parts which are not disordered, and bring the rest either forward in line—under separate officers in detachments different ways, or to rear, right, and left: and halt each as they recover some order; and then marching the parts to the positions analogous to those from which they had been deranged; it would be a useful exercise to create this disorder, in order to be ready at correcting it.

CLEY-MORE, (*Celtic*, the *large sword*) a great sword, formerly in use among the highlanders, two inches broad, doubly edged: the length of the blade, 3 feet 7 inches; the handle, 14 inches; of a plain transverse guard, 1 foot; the weight, 6 pounds and a half. These swords were the original weapons of England, as appears by the figure of a soldier found among the ruins of London, after the great fire in 1666.

COALITION, see CONFEDERACY.

COAT of *Mail*, armor made of scales or iron rings.

COCK, that part of the lock of a musket, which sustains the two small pieces of iron called jaws, between which the flint is fixed.

To COCK, to fix the cock of a musquet or pistol, so as to have it ready for an instant discharge.

COCKADE, a ribbon worn in the hat. This military mark succeeded the scarf that was formerly worn by the officers and soldiers belonging to European nations, which are principally distinguished in the following manner. In the army and navy of Great Britain, black silk riband for the officers, and hair cockades for the non-commissioned officers, private soldiers and mariners; light blue, pink and white ribands mixed, called tricolor or three-colored, distinguish the French; red marks the Spaniard, black the Prussian and Austrian, green the Russian, &c. Under the old government of France, officers were not permitted to wear a cockade, unless they were regimentally dressed; and, singular as it may appear, the officers and men belonging to a certain number of old regiments in the Prussian service do not wear any mark in their hats. In the United States the cockade is worn, in and out of regimentals, by every species of military character.

COFFER, in *fortification*, a hollow lodgment sunk in the bottom of a dry ditch, from 6 to 7 feet deep, and from 16 to 18 feet broad, and the length of it, the whole breadth of the said ditch, from side to side. The besieged generally make use of these coffers to repulse the besiegers, when they attempt to pass the ditch: they are distinguished only by their length from *Caponiers;* the difference between coffers and the traverse and gallery, consists in this, that the latter are made by the besiegers, and the former by the besieged. They are covered with joists, hurdles, and earth, raised 2 feet above the bottom of the ditch; which rising serves instead of a parapet, with loop-holes in it.

COFFRE. See COFFER.

COGNIZANCE. Judicial notice, trial, judicial authority. In a military sense, implies the investigation to which any person or action is liable. During the suspension of civil authority, every offence comes under military cognizance, is subject to military law, and may be proceeded upon according to the summary spirit of its regulation. Hence, a drum-head court-martial is the strongest instance of military cognizance.

COHORT, in *Roman antiquity*, a name given to part of the Roman legion, comprehending about 600 men.

COINS, in gunnery, are a kind of wedges to lay under the breech of a gun, to raise or depress the metal.

COLLET, *Fr.* that part of a cannon which is between the astragal and the muzzle.

COLONEL, the commander in chief of a regiment, whether of horse, foot, dragoons, or artillery: but in France, Spain, and some other southern nations, the colonels of horse are called *Mâitres de Camp;* in Germany, and most northern nations, they are called *Ritmeesters.* Colonels of foot in the English army take place, and command one another, according to the seniority of their regiments, and not of their commissions; but those of horse, on the contrary, according to the dates of their commissions.

COLONEL *of horse*, who is the first officer of the regiment; hence his attention ought to be given to keeping the regiment complete, to have it composed of both men and horses fit for service, and to take particular care to have them well exercised and taught the different evolutions; to be able on all occasions to form themselves according to the ground, or manner in which they may attack, or be attacked.

Colonel *of foot*, or *infantry*. His functions are more extensive than those of the cavalry, as the infantry are employed to more and different purposes. A colonel of infantry should understand something of fortification, and be well acquainted with field-engineering. He cannot be too careful to maintain union and harmony among his officers; and, to succeed in this, he must acquire their esteem and confidence, and make himself to be respected. The true way to succeed in this, is to keep up subordination with unalterable firmness; to do justice to every one, to employ all his credit to procure favors to the corps in general, and to the officers in particular, without ever losing sight of the health, comfort, and contentment of his men.

Colonel *of dragoons* is nearly connected with that of horse, to which word we refer the reader.

Colonel *of artillery*. The commander of a battalion of artillery is one of the most laborious employments both in war and peace, requiring the greatest ability, application, and experience. He is supposed to be a very able mathematician and engineer, to be thoroughly acquainted with the power of artillery, to understand the attack and defence of fortifications in all the different branches; to be able on all occasions to form the artillery according to the ground or manner in which they may attack or be attacked; in short, he should be master of every thing belonging to that important corps.

Colonel *of engineers*, should be a very able mathematician and mechanician, he should be master of fortification, and be correctly versed in the art of planning, constructing, attacking, and defending. See **Engineer**.

Lieutenant **Colonel**, is the second person in command of a regiment. Under his direction all the affairs of the regiment are conducted. His military qualifications should be adequate to the size and the importance of the corps in which he has the honor to serve.

Colonel *general of the French infantry*. An appointment of great trust and authority, which was suppressed during the old government of France. A colonel-general was formerly entitled to the nomination of every commission and place of trust in the infantry. He could order courts-martial, and enforce the sentences awarded by them without ulterior reference; and he had a company in every regiment which was called the colonel-general's company.

This appointment was created during the reign of Francis I. in 1544, and became an immediate gift of the king, under Henry III. in 1584.

There was likewise a colonel-general of the cavalry; which appointment was entrusted to two officers under the reign of Louis XIII. One commanded the French and the other the German cavalry.

The appointment of colonel-general of dragoons was created by Louis XIV. in 1688.

Colonelle, *Fr.* was formerly the first company in a French regiment. *Madame la Colonelle* is still the colonel's wife.

COLORS in the military art, are large silk flags fixed on half pikes, and carried by the ensigns; when a battalion is encamped, they are placed in its front; but in garrison they are lodged with the commanding officer.

The size of the colors to be 6 feet 6 inches flying, and 6 feet deep on the pike. The length of the pike (spear and ferril included) to be 9 feet 10 inches. The cords and tassels of the whole to be of the standard color, mixed with gold or silver; silver for the infantry and cavalry; gold for the artillery, rifle corps, and engineers.

Camp-**Colors**, are a small sort of colors placed on the right and left of the parade of a regiment when in the field: one or two to each company; they are 18 inches square, and of the color of the facing of the regiment, with the number of the regiment upon them. The poles to be 7 feet 6 inches long, except those of the quarter and rear-guards, which are to be 9 feet. See **Bannerolls**.

Color-*guard*. See **Guard**.

Colors, *used in the drawings of fortification*. It is necessary to use *colors* in the drawings of plans and profiles of a fortification, in order to distinguish every particular part, and separate, as it were, the one from the other, so as to make their difference more sensible. The different sorts of *colors*, generally used in these kinds of drawings, are, *Indian-ink*, *carmine*, *verdigrease*, *sap-green*, *gum-bouge*, *Prussian blue*, *indigo*, and *umber*.

Indian-ink is the first and most necessary thing required in drawing; for it serves, in drawing the lines, to express hills or rising grounds, and, in short, for all what is called shading in drawings. The best sort of *Indian ink* is of a bluish black, soft and easily reduced into a liquid, free from sand or gravel. It is made in oblong squares. The manner of liquefying it, is by putting a little clear water into a shell or tea-cup, and rubbing it gently 'till the water is black, and of a consistence much like common ink: when it is used for drawing lines, it must be made very black, though not too thick, otherwise it will not easily flow out of the camel hair pencil; but when it is for shading, it must be pale, so as to go over the same shade several times, which adds a beauty to the shading.

Carmine, is an impalpable powder, and the fairest red we know of: it serves for coloring the sections of masonry, the plans of houses, and all kinds of military buildings; as likewise their elevation; but then it is made of a paler color. It is also used for drawing red lines in plans, to represent walls. It is of a high price, but a little will go a great way. It must be mixed with a little gum-water.

Verdigrease, or *sea-green*, used in drawings, is either liquid in small phials, or mixed in little pots or shells, &c. it serves to color wet ditches, rivers, seas, and in general to represent all watery places; it is most soluble in vinegar; and mixed with vinegar makes a fine green ink.

Sap-green, is a stone of a faint yellowish green, when liquefied with clear water: but when mixed with a little sea green, it makes a beautiful grass-green; but, as all mixed *colors* are liable to fade, if *verdigrease* can be had, it will be much better. *Sap-green* is very cheap.

Gum-bouge, is a fine yellow gum. It may be dissolved in water, but requires no other gum: it serves to color all projects of works; as likewise to distinguish the works unfinished from those that are complete. It serves also to color the trenches of an attack.

Indigo, is in small cakes, and very cheap; it serves to color iron, and roofs of buildings which are covered with slates: it must be well ground upon a smooth stone or glass, and mixed with a little gum-water.

Prussian blue, is a kind of friable substance of an exceeding fine blue: it is used to represent the color of blue cloth in drawing encampments, battles, &c. It must be well ground, and mixed with a little gum-water.

Smalt, also a good sort of blue, and may be used for the same purposes.

Ultramarine, is an impalpable powder, and of a very delicate sky-blue. It is a *color* of high price.

Umber, is a yellowish brown *color* in powder: when it is mixed with gum-water, it serves to color dry ditches, sand, and all kinds of earth. By mixing a little red ink with it, it will make a wood *color*.

If some tobacco-leaves be steeped in clear water for several hours, and filtered through a woollen cloth, or brown paper, with a little red ink mixed with it, it will make the best earth or wood *color*, as lying smoother than any other.

Gum-water, is best when it is made some time before it is used; for which purpose take some *gum arabic* and steep it in clear water for some hours, 'till it is dissolved; then strain it through a woollen cloth or brown paper, and preserve it in phials, well stopped, 'till wanted.

COLUMN, in the art of war, a long, deep file of troops or baggage. The advantages and disadvantages of columns are so numerous, that we shall only mention, that columns ought to be able to form near the enemy; and in such a position, as not to suffer much from the artillery; that their motions be quick, so as not to suffer much during the operation; and that the divisions, in short, which compose each column, be so arranged as to afford each other a mutual defence and assistance, in case they should be attacked. Such are the principles that should guide, in forming of columns judiciously, and of freeing them from that multiplicity of inconveniencies which make them liable to the most melancholy accidents. The chevalier Folard has written a treatise on the disposition of the column as the best order of battle; after his death the theory sunk into disregard; but the French revolution has revived and realized all the advantages, held forth by Folard.

Close-COLUMN, a compact, solid column, with very little space between the divisions of which it is composed.

Open-COLUMN, a column with intervals between the divisions equal to their respective fronts.

COMBAT, a battle or duel. Anciently it was not uncommon for contending powers to adjust their disputes by single combat, when each party chose for itself a champion who contested the point in presence of both armies.

COME-*in*, soldiers are said to come in, as volunteers, recruits, &c. when invited to join any particular standard.

COME-*over*, when men desert from an enemy, and join the army that opposes them, they are said to come over. This term is opposed to *go over*.

To COME-*in to*, to join with, to bring help. "They marched to Wells, where the Lord Audley, with whom their leaders had before secret intelligence, *came in to* them." *English History*.

To COME-*up*, to overtake. To come up with an enemy, is a military phrase much in use.

COMINGE, *Fr.* a shell of extreme magnitude, which takes its name from the person who originally invented it.

COMMAND, generally called *the word of command*, is a term used by officers in exercise, or upon service.

COMMAND, in military matters. All *commands* fall to the eldest in the same circumstances, whether of horse, dragoons, artillery, foot, or marines.

COMMANDE, a rope made use of in boats and pontoons.

COMMANDS, *in fortification*, are:

A command in front, when any eminence is directly facing the work which it commands.

A command in rear, when any eminence is directly behind the work which it commands.

A command by enfilade, when an eminence is situated in the prolongation of any line of a work, and a considerable part of it may be seen from thence.

COMMANDANT, is that person who has the command of a garrison, fort, castle, regiment, company, &c. called also commander.

COMMANDEMENT *Fr.* in a military sense, means any spot which is higher than another. A commandement is called *simple*, when the difference between two heights is only 9 feet. It is called *double*, when the difference is 18 feet; triple when 27, and so progressively, taking 9 feet invariably, for the height of each commandement. A commandement may be considered in three lights. In *front*, in *enfilade*, and in *reverse*. The commandement in *front*, is when you see all the persons who are employed in protecting a work; in *enfilade*, when you only see them from a flank; and in *reverse*, when you see them obliquely from behind.

COMMANDING-*ground*, implies in a military sense, a rising ground which overlooks any post, or strong place. There are, strictly speaking, three sorts of commanding grounds; namely,

Front **Commanding**-*ground*, Every height is called so, that lies opposite to the face of the post which plays upon its front.

Reverse **Commanding**-*ground*, an eminence which plays upon the rear of a post.

Enfilade **Commanding**-*ground*, or *Curtain* **Commanding**-*ground*, a high place, which, with its shot, scours all the length of a line, &c.

COMMANDERY, a certain benefice belonging to a military order. A body of the knights of Malta, were so called. They have now only a nominal existence.

COMMIS, *Fr.* Clerk or inferior person, who is employed in any of the French war-departments.

COMMISSAIRE, *Fr.* Commissary. This term was used in the old French service, to express a variety of military occupations. The following are the principal designations.

Commissaire-*général des armées*. Commissary-general of the armies. His duties were correspondent to those of a quarter master, forage master, or agent for supplying an army with provisions and stores.

Commissaire-*général de la cavalerie degére*. Fr. Commissary general of light cavalry.

Commissaire *d'artillerie*. Fr. Commissary of artillery. One commissary general superintended in each department of the ordnance, and had one of the three keys which belonged to the general magazine. This officer had the power of giving directions respecting the cleanliness and the general government of the magazines.

Commissaire *provinciaux d'artillerie*, Fr. Provincial commissaries attached to the ordnance.

Commissaire *ordinaires d'artillerie*, Fr. Commissaries in ordinary attached to the ordnance. These were subordinate to the provincial commissaries, and were distributed among the navy, forts, and garrison towns.

Commissaires *extraordinaires d'artillerie*, Fr. Extraordinary commissaries attached to the ordnance. These formed the third class of commissaries under the monarchial government in France. They likewise did duty on board the king's ships, or in garrisoned towns.

Commissaire *provincial en l'Arsenal de Paris, au départment de l'Isle de France.* Provincial commissary belonging to the arsenal in Paris. This officer received his commission from the grand master, in whose gift the situation lay, and had the exclusive privilege of being rendered privy to every alteration or movement that was made in the arsenal.

Commissaire *géneral des poudres et saltpetres*, Fr. Commissary general of gun-powder and saltpetre.

Commissaire *général des fontes*, Fr. Commissary general of the Founderies.

Commissaires *des guerres*, Fr. Commissaries of the war departments or muster masters general.

Commissaires *ordinaires des guerres*, Fr. Commissaries in ordinary, or deputy muster masters. These were subordinate to the former, and were entrusted with the superintendance of hospitals, to see that proper provisions were procured for, and distributed among the sick. They likewise gave proper vouchers to account for the absence of soldiers, and regulated what number of extraordinary waggons should be furnished to the troops on marches.

Commissaire *provinciaux et ordinaires des guerres*, Fr. Provincial or ordinary commissaries of war. Specific duties were attached to their appointments, the discharge of which was principally confined to the different provinces.

Commissaires *des guerres entretenus dans l'hotel des invalides* Fr. Commissaries of war, specifically attached to, and resident in the hotel des invalides. It was their duty to keep a regular roll, containing all the names of the different officers, non-commissioned officers, and soldiers who might be detached on garrison duty, &c. which return was made monthly by them to the secretary at war. Each commissary at every review or inspection of the corps of invalids, had particular directions to mark out those men who appeared capable of serving; and a regular return to that effect was made to the secretary at war.

Commissaire *des vivres*, Fr. Commissary of stores. The commissary of stores had several deputies, who acted immediately under, and were in every respect accountable to him for the management of their trust.

Commissaire *general des fortifications*, Fr. Commissary general of Fortifications. This was a very important situation during war, as it was the duty of the commissary general to trace the lines of circumvallation, &c. at the siege; to determine upon the mode of attack and defence, and to see, that the necessary repairs were made.

COMMISSARY, in military affairs, is of various denominations, though generally a civil officer appointed to inspect the musters, stores, and provisions for the army. In war-time their number is proportioned to the service required.

Commissary-*general of the musters*, or *muster-master general*. He takes account of the strength of every regiment as often as he pleases; reviews them, sees that the horse are well mounted, and all the men well armed and clothed. He receives and inspects the muster rolls, and knows exactly the strength of the army. The British have created an *inspector general of cavalry*, which answers every purpose for which that of muster master general was intended.

Commissary-*general of stores*, a civil officer in the artillery, who has the charge of all the stores, for which he is accountable to the office of ordnance. He is allowed various other commissaries, clerks, and conductors, especially in war-time.

Commissary *of the train horses*, a civil officer likewise of the artillery, who has the inspection of all horses belonging to the train, the hospital, and the bakery; having under him a number of conductors, drivers, &c.

Commissary *of accounts* is a responsible person who attends each army, where the numbers are of sufficient importance, with a proper establishment, for the purpose of examining and controlling accounts on the spot. All commissaries of accounts make returns of their examination, and on these documents the comptrollers of the army accounts found the best enquiry into the expenditure which the nature of the subject admits of.

Commissary-*general of provisions*, has the charge of furnishing the army in the field with all sorts of provisions, forage, &c. by contract; he must be very vigilant and industrious, that the troops may never suffer want He has under him various commissaries, store-keepers, clerks, &c.

COMMISSION, in a military sense, any situation or place which an individual may hold in the army, or militia. In the United States the President nominates the officer, who enters upon service and pay immediately on his acceptance, but the appointment must be submitted to the senate, and approved by a majority, before the commission issues.

Militia Commissions are issued in different modes in all the United States; officers being elective by the line in some states, as in Pennsylvania; they are appointed by the governor, as Maryland

Commission *of array*. In the reign of Henry II. 1181, an assize of arms was settled to the following effect That every person possessed of a knight's fee, was to have a coat of mail, an helmet, a shield, and a lance, and as many of these as he had fees. Every free layman that had in goods or rents to the value of 16 marks, was to have the same arms; and such as had 10 marks were to have a lesser coat of mail, an iron cap, and a lance; the two last of which with a *wambois* were assigned for the arms of burgesses, and all the freemen of boroughs. These arms were all to be provided before the feast of St. Hilary next following.

To enforce these regulations, it was customary for the time, at certain seasons of the year, to issue commissions to experienced officers, to draw out and array the fittest men for service in each county, and to march them to the sea coasts, or to such other quarters of the country as were judged to be most in danger. Of these *commissions of array*, there are many hundreds in the Gascon and French rolls in the tower of London, from the 36th of Henry III. to the reign of Edward IV. The form of the ancient commissions of array may be seen in Rushworth's historical collection published in 1640. These commissions were again attempted to be revived by Charles I. but they were voted illegal and unconstitutional by the parliament.

Non-Commissioned, applies to that particular class of men who act between what are called the rank and file of a battalion, and the commissioned or warrant officers. See Serjeants

COMMITTEE, a select number of persons to whom the more particular consideration of some matter is referred, and who are to report their opinion to the court, &c. of which they are members.

COMMUNICATION, in fortification signifies all sorts of passages, or ways which lead from one work to another. The best, and indeed the only good communications are those which the besieger cannot annoy, or interrupt by his fire. The obstinate defence of a work is rendered almost impracticable, if you are destitute of good communications Subterraneous galleries, coffers, or caponiers, slopes made on the outside of gorges, may be termed communications. When the ditches are filled with water, floating bridges, &c. serve as communications.

COMPAGNE, *Fr.* a room or cabin belonging to the chief of a galley.

Companies-*Franches*, Fr. free corps or companies, which during the old government of France, were put upon a certain establishment in war time. The Austrians and Prussians had free corps in the seven years war; there were some in France at the beginning of the revolution, but they were more fatal to friends than enemies, and utterly destitute of discipline.

COMPANY, in a military sense,

means a small body of foot, or artillery, the number of which is never fixed, but is generally from 50 to 120, commanded by a captain, a lieutenant, and an ensign, and sometimes by a first and second lieutenant, as in the artillery and flank companies of the line. A company has usually 4 or 6 serjeants, 4 or 6 corporals, and 2 drums. A company should have at least 4 commissioned officers, a serjeant and corporal for every ten men and a company consist of 120. In the Austrian service a company consists of 200 men.

Free Company, is one of those corps commonly called irregular; is seldom or never under the same orders with the regular corps of the army, but for the most part acts like a detached army, either by itself, or in conjunction with some of its own kind; therefore their operations are properly considered under the title of the *petite guerre*. Same as companies Franches.

Independent Company, that which is not incorporated in a regiment. Two such companies generally belong to each regiment in England, who are to supply the regiments with recruits.

COMPARTIMENT *de feu*, Fr. a specific division of the intermediate spaces belonging to a mine, and the regular allotment of the saucissons or train-bags to convey fire to the furnaces at one and the same time.

COMPLEMENT *of the curtain*, that part in the interior side of a fortification which makes the demi-gorge. See Fortification.

Complement *of the line of defence*, the remainder of the line of defence, after you have taken away the angle of the flank. See Fortification.

COMPLETE, a regiment, troop, or company, is said to be complete when it has the whole number of officers, non-commissioned officers and privates, according to the regulation for the time being.

Compliment *of the line of the army*. See Honors.

Compliment *from guards*. See Honors.

COMPOSITION.—For the composition of Fuzes, Portfires, Tubes, Carcasses, see those words.

Composition for Kitt.

	lbs.
Rosin	9
Pitch	6
Beeswax	6
Tallow	1

For Fire Balls, 1794.

	lbs.	oz.
Rosin	5	8
Sulphur	3	0
Alum powder	1	8
Starch, Do.	0	8
Saltpetre	4	6
Mealed powder	8	0
Linseed oil	1-4 pint	
Oil of spike	1 pint.	

Bengal Lights.

First Composition.

	lbs.	oz.
Saltpetre	7	0
Sulphur	1	12
Red orpiment	0	1

Second Composition.

	lbs.	oz.
Saltpetre	2	4
Sulphur	0	8
Antimony	0	4
Orpiment	0	1½

Light Balls.

Nitre	40 parts
Sulphur	15
Antimony	3
Pitch	3

This composition to be carefully fused, and cast into the shape of balls, which when cold will be sufficiently hard to be fired from a small mortar.

Composition for *Suffocating Pots.*

Sulphur	6 parts
Nitre	5

This composition when intimately mixed, to be rammed into wooden boxes, and primed in the usual way.

This composition will answer for fumigation.

Chinese, or *White Light.*

Nitre	from 50 to 60 parts.
Sulphur	16 to 20
Antimony	5
Orpiment	8 to 10

For *Smoke Balls.*

	lbs.
Corned powder	10
Seltpetre	2
Pitch	4
Seacoal	3
Tallow	1

For *Fire Hoops*, *Fire Arrows*, *and Fire Lances.*

	lbs.	oz.
Mealed powder	1	0
Saltpetre	3	0
Flour of Sulphur	0	8
Linseed oil	1-2 pint.	

Composition to fill cases for *setting fire to Fascine Batteries.*

	lbs.	oz.
Mealed powder	1	4
Saltpetre	6	0
Sulphur	1	8

All dry compositions must be well mixed; first by the hands, and then passed several times through fine hair sieves, that the ingredients may be thoroughly incorporated. In mixing compositions which require fire, the greatest precautions are necessary; particularly in those where gunpowder enters. The dry parts of the composition may in general be mixed together first, and put by degrees into the cauldron, while the other ingredients are fluid, being well stirred all the time of putting in. When the dry ingredients are inflammable, the cauldron must not only be taken off the fire, but the bottom must be dipt in water, to prevent possibility of accident while mixing th

COMPOUND *motion*. See GUNNERY.

COMPTROLLER *of the artillery*, inspects the musters of the artillery, makes the pay-list, takes the account and remains of stores, and is accountable to the office of ordnance. This post is only in war-time. Also an officer who superintends the accounts of the army at large.

COMRADE, a fellow soldier in the same regiment, troop, or company.

To **CONCERT**, in a military sense, is to digest, arrange, and dispose matters in such a manner, that you may be able to act in conjunction with other forces, however much divided, at any given point of offensive or defensive operation.

CONCORDANT, *Fr.* a certain agreement, which officers belonging to the same corps in the French service formerly entered into, for the specific purpose of providing for a comrade who left the regiment. This contract was, however, without the sanction of government, and if known incurred its displeasure,

CONDUCTORS, are assistants to the commissary of stores, to conduct depots, or magazines, from one place to another: they have also the care of the ammunition waggons in the field; they report to the commissary, and are under his command.

CONFEDERATE *Troops*. Troops of different nations united together in one common cause against an enemy. Hence the league by which they are so engaged, is called a *confederacy*. The same as coalition, the powers of Europe coalesced in 1791, to partition France, and were defeated; there were several other coalitions since, which have ended in the subjugation of them all.

CONFIDENCE, in a military sense, implies an explicit reliance upon the skill, courage, &c. of an individual. Next to a perfect knowlege of military tactics, the faculty of securing the confidence of the soldiers is, perhaps, one of the surest means of becoming successful in war. There are instances, indeed, which prove that many victories have been gained by men who had the entire confidence of their army, without being remarkable for much military knowlege; whilst on the other hand, battles have been lost by the most celebrated generals, because they did not possess the good opinion of their men. When confidence and military science go together, an army must be unfortunate not to succeed in the most desperate enterprize.

CONFLICT. See COMBAT.

CONGE, *Fr.* leave of absence, The old service of France admitted of two sorts. The *Congé limité*, a limited or specific leave, and *Congé absolu*, a full discharge: in time of war, the latter was always suspended,

CONGLOMERATE, to gather together, to assemble in a knot.

CONGRESS, in military and political affairs, is an assembly of commissioners, deputies, envoys, &c. from several powers meeting to agree on terms for a general pacification, or to concert matters for their common good. A committee of the American Congress conducted the war during the first years of the revolution.

CONNETABLE *de France*. Constable of France. This appointment succeeded to that of Grand Sénéchal de France. It was not originally a military place of trust, but merely an office belonging to the king's household.

CONSCRIPT, *conscriptus*, a term anciently applied to the senators of Rome, from their names being entered all in one register. It was used by congress in our revolution.

CONSCRIPTS, men raised to recruit the French armies. In Bohemia and Hungary, all men capable of bearing arms are enregistered, and must march whenever there is occasion for their services. The conscripts in France have been raised during the present war upon similar principles.

The militia of Great Britain come under the appellation, with this difference, that the men are raised by ballot, and do not march out of their native country, unless they be voluntarily disposed so to do. In a republic every man is a soldier, and as the word means must have his *name written on the militia roll*.

CONSEILLE-*de-guerre*, Fr. not only signifies a council of war, at which the French king and his minister sat to determine upon military matters, both by sea and land, but it likewise meant a general or regimental court martial.

CONSIGNE, *Fr.* parole or countersign.

It likewise means, when used in the masculine gender, a person formerly paid by the French government for constantly residing in a garrisoned town, in order to take cognizance of all persons who entered or went out of the gates. He had a place allotted to him in the half-moon, and delivered a regular report to the governor or commandant of the place.

CONSPIRATION, *Fr.* Conspiracy.

CONSPIRATION *contre le servicedu Roi*, Fr. a conspiracy against the King's service. During the existence of the old government of France, any conspiracy, collusion, or unlawful understanding, which was discovered to exist against the king, his governors, commandants, or other inferior officers, was reckoned a capital military offence; and by an order which took place on the 1st of July, 1727; it was enacted, that every person convicted of the crime should be broken upon the wheel.

CONSTABLE, *chief*. A person employed under the militia establishment to collect fines.

They may likewise apprehend persons suspected of being deserted serjeants, corporals or drummers.

High CONSTABLE and *Marshal* were officers of considerable weight and dignity, not only in France, but throughout all the feudal governments of Europe. The title of constable or *comes stabuli*, according to the ingenious author of an essay on military law, explains the original nature of this office, which was that of commander of the cavalry, and as these once constituted the principal strength of the imperial or royal armies, this officer became naturally the commander in chief of those armies. The office of marshal appears originally to have been of a much inferior nature, the person who exercised it being the actual superintendant of the stables, or chief of the equerries, whose duty was to furnish the provender for the horses, and to oversee their proper management. But in process of time this office grew into high consideration, and the marshal subordinate only to the constable, became the second in command of the armies, and in the absence of the latter supplied his place. See Marshal.

The powers of the constable as a field officer, were extremely ample and dignified. The constable was subordinate only to the king in the command of the army; and even when the king was actually in the field, the efficient command of the troops seems to have been in this officer, and all the general orders were issued jointly in the sovereign's name and in the constable's.

CONSUL. The person invested with the powers of the consulate.

Consul *chief*, or *premier* **Consul**, *Fr.* The first or chief magistrate of three persons, each bearing the title of consul, according to the constitution of France, in 1799, the chief consul commanded, directed, and superintended all the military establishments of the country, and whenever it was judged expedient led the armies into battle. Bonaparte, was appointed chief consul; but soon after emperor.

CONSULAR, relating, or appertaining to the consul.

CONSULATE, a civil and military power which was originally instituted by the Romans, on the extinction of their kings in Tarquin the Proud. It has been revived in France, and was the principal feature of her last constitution.

CONSULSHIP. The office of consul.

CONTACT, a touching, or the point or points where one body touches another.

CONTINGENT, something casual or uncertain, that may or may not happen.

The **Contingent** *bill* of a regiment, is an account of extra charges, which depend on the accidental situation or circumstances, which may attend any regiment in its due course of service. See Recruiting.

CONTRABAND, this term is applicable to various foreign commodities which are either totally prohibited by the laws, or are subject to severe penalties and heavy duties.

CONTRAMURE, in fortification, is a wall built before another partition wall to strengthen it, so that it may receive no damage from the adjacent buildings.

CONTRAVALLATION, in military art, implies a line formed in the same manner as the line of circumvallation, to defend the besiegers against the enterprises of the garrison: so that the army, forming a siege, lies between the lines of circumvallation and contravallation. The trench of this is towards the town, at the foot of the parapet, and is never made but when the garrison is numerous enough to harrass and interrupt the besiegers by sallies. This line is constructed in the rear of the camp, and by the same rule as the line of circumvallation, with this difference, that as it is only intended to resist a body of troops much inferior to a force which might attack the circumvallation, so its parapet is not made so thick, nor the ditch so wide and deep; 6 feet is sufficient for the 1st, and the ditch 8 feet broad, and 5 feet deep.

Amongst the ancients this line was very common, but their garrisons were much stronger than ours; for, as the inhabitants of towns were then almost the only soldiers, there were commonly as many troops to defend a place, as there were inhabitants in it. The lines of circumvallation and contravallation are very ancient, examples of them being found in histories of the remotest antiquity. The author of the military history of *Louis le Grand* pretends however, that *Cæsar* was the first inventor of them; but it appears from the chevalier de Folard's treatise on the method of attack and defence of places, used by the ancients, how little foundation there is for this opinion. This author asserts with great probability on his side, that these lines are as ancient as the time in which towns were first surrounded with walls, or, in other words, were fortified.

CONTREBANDE, *Fr.* See Contraband.

Faire la **Contrebande**, *Fr.* to smuggle.

CONTREBANDIER, *Fr.* a smuggler.

CONTRE-*Forts*, Fr. Brick-work which is added to the revetement of a rampart on the side of the terre-pleine, and which is equal to its height. Contre-forts are used to support the body of earth with which the rampart is formed. They are likewise practised in the revetements of counterscarps, in gorges and demi-gorges, &c. The latter are constructed upon a less scale than the former. It has been suggested by an able engineer in the French service, to unite contre-forts, and consequently to strengthen them, by means of arches.

Contre-forts likewise form a part of the construction of powder magazines, which are bomb proof.

Contre-*queue d'hironde*, *Fr.* denotes the figure or shape which is made by the oblique direction of the wings, or long sides of a horned or crowned work, whose branches widen as they approach any place.

CONTRIBUTION, in military history, is an imposition or tax paid by countries who suffer the afflictions of war, to redeem themselves from being plundered and totally destroyed by the enemy; or when a belligerent prince, wanting money, raises it by contribution on the enemy's country, and is either paid in provisions or in money, and sometimes in both.

CONTROL, *comptrol*, or *controle*, is properly a double register kept of acts, issues of the officers or commissioners in the revenues, army, &c. in order to ascertain the true state thereof.

CONTROLER, an officer appointed to control or oversee the accounts of other officers, and on occasions to certify whether or no things have been controled or examined

CONTROLES, *Fr.* See MUSTER-ROLLS.

CONTROLEURS *des guerres*, Fr. Muster-masters. This term was likewise applied to signify various other appointments belonging to the interior arrangement of the French army, viz. controlleurs general d'artillerie, controleurs des hopiteaux militaires. See SUPERINTENDANT of military hospitals.

CONTROLEUR *general des vivres*. See COMMISSARY general of stores.

CONVALESCENT, recovering, returning to a state of health.

List of CONVALESCENTS, is a return made out by the surgeon belonging to a battalion, hospital, &c. to ascertain the specific number of men who may shortly be expected to do duty.

CONVENTION, a treaty, contract, or agreement between two, or more parties.

CONVERSION, is a military motion or manœuvre, which turns the front of a battalion where the flank was, when the flank is attacked. The old method of conversion is now exploded, and the new method which has superceded it; has received the name of *counter-march*, or *changing front by counter-march*; this is best effected in column; and is never attempted in line in the face of an enemy. For the manner of performing it and the bad effects of attempting it in the face of an enemy, see *Am. Mil. Lib.*

CONVOY, in military affairs, a detachment of troops employed to guard any supply of men, money, ammunition, provisions, stores, &c. conveyed in time of war, by land or sea, to a town, or army. A body of men that marches to secure any thing from falling into the enemy's hand, is also called a *convoy*. An officer having the command of a convoy, must take all possible precautions for its security; and endeavor, before its march, to procure some good intelligence concerning the enemy's out-parties. And as the commanding officer of the place from which the convoy is to march, and those of such other places as he is to pass by, are the most proper persons to apply to for assistance; he must therefore take such measures as will enable him to keep up a constant intercourse with them. The conducting a convoy is one of the most important and most difficult of all military operations.

CONVOYS. A waggon with four horses occupies about sixteen paces; a mile will therefore hold about 117 waggons: but allowing a short distance between each waggon in travelling, a mile may be said to contain 100 waggons. Waggons in convoy may travel from one to two miles per hour, according to the roads and other circumstances. A great object in convoys is to preserve the horses as much as possible from fatigue. For this purpose, if the convoy amounts to many hundred waggons, they must be divided into divisions of not more than 500 each. Should it consist of thousands, it will be adviseable to divide them into *grand* divisions, and then again into subdivisions of 500 each: by this means, and the time of departure being calculated by the following rules, each division may remain at rest, till just before its time of movement; and which will prevent the necessity of the latter part of a large convoy being harrassed for a considerable time befor eits turn to move.

Rule 1. *To find the time in which any number of waggons may be driven off:* Divide the number of waggons by 100, and multiply by the time of travelling one mile.

Rule 2. *To find the time in which any number of waggons will drive over any number of miles:* To the time they take in driving off, add the time any one of the waggons takes to travel the distance.

The different divisions of the convoy should be numbered, and obliged each day to change the order of their marching.

Whenever the progress of a train of waggons is arrested by the breaking down of any one of them, or other delay, all the waggons in the rear of the stoppage, should immediately drive up into the first open space, to as great a number as the open space will hold; this keeps the convoy together and better under the care of the escort.

The escort for a convoy should be divided into front, centre, and rear guards; beside the divisions for the flanks, which should never be beyond musquet shot, or at most 400 yards from each other. The whole escort should never be so separated that they could not be collected in an hour. Under proper precautions against an enemy, a convoy of any size cannot travel more than ten or fifteen miles per day.

To **CO-OPERATE**, to put a well digested plan into execution, so that forces, however divided, may act upon one principle and towards one end.

COOK, each troop or company has cooks, who are excused from other duties.

COPPER. No other metal is allowed to the magazines, or barrels of gunpowder.

COQUILLES *à boulet*, Fr. shells or moulds. They are made either of brass or iron; two are required for the casting of a cannon ball; but they never close so effectually as to prevent the liquid metal, which has been poured in, from running somewhat out of the part where they join. This excrescence is called the beard, which is broken off to render the ball completely round.

CORBEILLES, *Fr.* Large baskets, which being filled with earth, and placed one by another along the parapet, serve to cover the besieged from the shot of the besieging enemy. They are made wider at top than at the bottom, in order to afford loop-holes, through which the men may fire upon the besiegers. Their usual dimensions are one foot and a half high, as much in breadth at the top, and eight or ten inches at the bottom. See GABION.

CORDE, *Fr.* Cord, in geometry and fortification, means a straight line which cuts the circumference into two parts, without running through the centre.

CORDEAU, *Fr.* a cord which is used in measuring ground. It is divided into toises, feet, and inches, for the purpose of ascertaining with precision, the opening of angles and the extent of lines. In wet weather a small chain made of wire is substituted to prevent mistakes that would necessarily occur, from the cord becoming shorter or longer, according to the influence of the weather. The technical terms among French Engineers, are Manier le *cordeau*. Pendre le *cordeau*, Travailler au *cordeau*.

CORDON, in fortification, is a row of stones made round on the outside, and placed between the termination of the slope of the wall, and the parapet which stands perpendicular, in such a manner, that this difference may not be offensive to the eye; whence those cordons serve only as ornaments in walled fortifications.

The CORDON of the revetement of the rampart is often on a level with the terre pleine of the rampart. It has been observed in a late French military publication, that it might be more advantageously placed some feet lower; especially when there is a wall attached to the parapet, to shield the rounds from the enemy's fire.

CORDON, in military history, is a chain of posts, or an imaginary line of separation between two armies, either in the field or in winter quarters,

CORIDOR, the covert way which is formed between the fossé and the pallisade on the counterscrap. See COVERT-WAY. This word is becoming obsolete as a military term, and is chiefly confined to domestic buildings.

CORNAGE, an ancient tenure, which obliged the land-holder to give notice of an invasion by blowing a horn.

CORNE, *ou* OUVRAGE *à* CORNE, *Fr.* See HORNED-WORK.

CORNET, in the military history of the ancients, an instrument much in the nature of a trumpet: when the cornet only sounded, the ensigns were to march alone without the soldiers; whereas, when the trumpet only sounded, the soldiers were to move forward without the ensigns. A troop of horse was so called.

CORNET, in the military history of the moderns, the junior commissioned officer in a troop of horse or dragoons, subordinate to the captain and lieutenants, equivalent to the ensign amongst the foot. His duty is to carry the standard, near the centre of the front rank of the squadron.

CORNETTE-BLANCHE, *Fr.* an ornament which in ancient times, served to distinguish French officers who were high in command. It was worn by them on the top of their helmets. It likewise meant a royal standard, and was substituted in the room of the Pennon Roïal. The cornette-blanche was only unfurled when the king joined the army; and the persons who served under it were princes, noblemen, marshals of France, and old captains, who received orders from the king direct.

CORNETTE, *Fr.* See CORNET.

The CORNETTES or *Cornets*, of the colonel general of cavalry, in the old French service, as well as those attached to the quarter-master general and commissary general, ranked as lieutenants, and the cornettes of la colonelle général des dragons ranked as youngest lieutenants, and commanded all other cornets.

CORNETTE, *Fr.* was likewise the term used to signify the standard peculiarly appropriated to the light cavalry. Hence cornettes and troops were synonimous terms to express the number of light-horse attached to an army. The standard so called was made of taffeta or glazed silk, one foot and a half square, upon which the arms, motto, and cypher of the officer who commanded the cavalry were engraved. A sort of scarf or long piece of white silk, (the old French colors) was tied to the cornette whenever the cavalry went into action, in order to render the standard conspicuous, that the men might rally round it.

CORNISH *ring*, in gunnery, the next ring from the muzzle backwards. See CANNON.

CORPORAL, a rank and file man with superior pay to that of common soldiers, and with nominal rank under a serjeant. He has charge of one of the squads of the company, places and relieves centinels, and keeps good order in the guard. He receives the word of the inferior rounds that pass by his guard. Every company should have a corporal for every ten men.

Lance-Corporal, one who acts as corporal, receiving pay as a private.

CORPS, any body of forces, destined to act together under one commander.

Corps *de garde*, Fr. an inferior post which is sometimes covered in, and at others is in the open air, garrisoned and defended by troops who are occasionally relieved, and whose immediate duty is to prevent a post of greater consequence from being surprised. *Corps de garde*, in the French acceptation of the word, signifies not only the place itself, but likewise the men who are stationed to protect it.

Corps *de garde avancés*, Fr. These posts are occupied by cavalry and infantry, according to the exigency of the service, and the peculiar nature of the ground. When a camp is secured by entrenchments, and has one line of defence, the corps de garde, or advanced post of the cavalry is on the outside of the line, and each part has its quarter and main guard. These guards are always within sight of the same line, unless the unevenness of the ground should obstruct the view. The quarter guard or petit corps de garde is more in front, but still in sight of the main guard, and the *vedette* is still further in advance for the security of both.

Corps *de battaille*, Fr. the main body of an army, which marches between the advanced and the rear guard.

Corps *de reserve*, See Rear Guard.

CORRESPOND, an officer or soldier who corresponds with the enemy, is liable to suffer death, by the articles of war.

CORSAIR, in naval history, a name given to the piratical cruisers of Barbary, who frequently plunder the merchant ships of countries with whom they are at peace.

CORSELET, a little cuirass; or according to others, an armor, or coat made to cover the whole body, anciently worn by the pike-men, who were usually placed in the fronts and flanks of the battle, for the better resisting the enemy's assaults, and guarding the soldiers posted behind them.

COSECANT, the secant of an arch which is the complement of another to 90°.

COSINE, the right sine of an arch which is the complement of another to 90°

COSSACS, in military history, a wild irregular people, who inhabit the Ukraine, and live by plunder and piracy, in small vessels on the Black Sea. A scythe fixed on the end of a pole was their ancient weapon. They are now a regular militia, and use the same arms as the Croats and Pandours.

COTANGENT, the tangent of an arch which is the complement of another to 90°.

COTE *extérieur du poligone*, Fr. exterior side of the polygon. The line which is drawn from the capital of one bastion to another.

Cote *intérieur du poligone*, Fr. interior side of the polygon. The line which is drawn from the angle of one gorge to the angle of the gorge most contiguous to it. See sides of the Polygon.

COUNCIL *of war*, in military affairs, is an assembly of principal officers of an army or fleet, called by the general or admiral who commands, to concert measures for their conduct.

COUNTER-Approaches, lines or trenches made by the besieged, when they come out to attack the lines of the besiegers in form.

Line of Counter Approach, a trench which the besieged make from their covered way to the right and left of the attacks, in order to scour or enfilade the enemy's works.

Counter-*Battery*, a battery used to play on another in order to dismount the guns. See Battery.

Counter-*breastwork*. See Fausse-braye.

Counter-*forts*, in fortification, are certain pillars and parts of the wall, distant from 15 to 20 feet one from another, which are advanced as much as may be in the ground, and are joined to the height of the cordon by vaults, to sustain the chemin de rondes, and the part of the rampart, as well as to fortify the wall, and strengthen the ground. See Buttresses.

Counter-*guards*, in fortification, are small ramparts, with parapets and ditches, to cover some part of the body of the place. They are of several shapes, and differently situated. They are generally made before the bastions, in order to cover the opposite flanks from being seen from the covert way; consisting then of 2 faces, making a salient angle, and parallel to the faces of the bastion. They are sometimes made before the ravelins. See Fortification.

Counter-*round*. See Rounds.

Counter-*mines*. See Mines.

Counter-*trenches*. See Siege.

Counter-*working*, is the raising of works to oppose those of the enemy.

Counter-*swallow's-tail*, in fortification, is a kind of an out-work very much resembling a single tenaille.

To Countermand, is to give contrary orders to those already given; to contradict former orders, &c.

COUNTERMURE, a wall built up behind another in order to increase the strength of any work.

COUNTERMARCH, a change by wings, companies, subdivisions, sections, or files, whereby those who were on the right take up the ground originally occupied by the left; generally used in changing the front. See March.

COUNTERSCARP, in fortification,

is properly the exterior *talus*, or slope of the ditch, on the farther side from the place, and facing it. Sometimes the covert way and glacis are meant by this expression. See FORTIFICATION.

COUNTERSIGN, in a general acceptation of the term means any particular word, such as the name of a place or person, which, like the parole, is exchanged between guards, entrusted to persons who visit military posts, go the rounds, or have any business to transact with soldiers in camp or garrison. It ought always to be given in the language most known to the troops.

COUNTERVALLATION, or line of countervallation, a trench with a parapet, made by the besiegers, betwixt them and the place besieged, to secure them from the sallies of the garrison; so that the troops which form the siege, are encamped between the lines of circumvallation and countervallation. When the enemy has no army in the field, these lines are useless.

COUP-DE-MAIN, in military affairs, implies a desperate resolution in all small expeditions, of surprise, &c. The favorable side of the proposed action must ever be viewed; for if what may happen, arrive, or fall out, is chiefly thought upon, it will, at the very best, not only greatly discourage, but, in general, it will produce a total failure. The very name of an expedition implies risk, hazard, precarious warfare, and a critical but desperate operation, or *Coup-de-main.*

COUP-*d'œil*, Fr. in a military sense, signifies that fortunate aptitude of eye in a general, or other officer, by which he is enabled at one glance on the ground or on a map to see the weak parts of an enemy's country, or to discern the strong ones of his own. By possessing a ready *coup d'œil*, a general may surmount the greatest difficulties, particularly in offensive operations. On a small scale this faculty is of the greatest utility. Actions have been recovered by a sudden conception of different openings upon the enemy, which could only be ascertained by a quick and ready eye, during the rapid movements of opposing armies. See *Am. Mil. Lib.* articles RECONNOITRING, and COUP D'OEIL.

COUPURE, in fortification, are passages, sometimes cut through the glacis, of about 12 or 15 feet broad, in the reentering angle of the covert way, to facilitate the sallies of the besieged. They are sometimes made through the lower curtain, to let boats into a little haven built on the rentrant angle of the counterscarp of the out works.

COURANTIN, *Fr.* a squib; a term used among French artificers.

COURCON, *Fr.* a long piece of iron which is used in the artillery, and serves to constrain, or tighten cannon.

COURIER, in a military sense, means a messenger sent post, or express, to carry dispatches of battles gained, lost, &c. or any other occurrences that happen in war.

COURIERS *des vivres*, Fr. were two active and expert messengers attached to the French army, whose duty consisted wholly in conveying packets of importance to and fro, and in taking charge of pecuniary remittances.

COURONEMENT, or *Couronnement*, in fortification, implies the most exterior part of a work when besieged.

COURSER. See CHARGER.

COURSIER, *Fr.* a gun which was formerly placed in the forecastle of a galley for the purpose of firing over the ship's beak. The weight of its ball was from 33 to 34 lb.

COURT-*martial*, a court appointed for the investigation and subsequent punishment of offences in officers, under-officers, soldiers, and sailors; the powers of which are regulated by the articles of war for the government of the armies of the United States, passed in the year 1806.

Art. 64. General courts martial may consist of any number of commissioned officers from five to thirteen inclusively. but they shall not consist of less than thirteen, where that number can be convened, without manifest injury to the service.

Art. 65. Any general officer commanding an army, or colonel commanding a separate department, may appoint general courts martial whenever necessary. But no sentence of a court martial shall be carried into execution until after the whole proceedings shall have been laid before the officer ordering the same, or the officer commanding the troops for the time being; neither shall any sentence of a general court martial, in time of peace, extending to the loss of life, or the dismission of a commissioned officer, or which shall, either in time of peace or war, respecting a general officer, be carried into execution, until after the whole proceedings shall have been transmitted to the secretary of war, to be laid before the President of the United States, for his confirmation or disapproval and orders in the case. All other sentences may be confirmed and executed by the officer ordering the court to assemble, or the commanding officer for the time being, as the case may be.

Art. 66. Every officer commanding a regiment, or corps, may appoint, for his own regiment or corps, courts martial, to consist of three commissioned officers, for the trial and punishment of offences, not capital, and decide upon their sentences. For the same purpose all officers, commanding any of the garrisons, forts, barracks, or other places where the troops consist of different corps, may assemble courts martial, to consist of three commissioned officers, and decide upon their sentences.

Art. 67. No garrison, or regimental court martial shall have the power to try capital cases, or commissioned officers; neither shall they inflict a fine exceeding one month's pay, nor imprison, nor put to hard labor, any non-commissioned officer or soldier, for a longer time than one month.

Art. 68. Whenever it may be found convenient and necessary to the public service, the officers of the marine shall be associated with the officers of the land forces, for the purpose of holding courts martial and trying offenders belonging to either; and in such cases the orders of the senior officers of either corps who may be present and duly authorised, shall be received and obeyed.

Art. 69. The judge advocate, or some person deputed by him, or by the general, or officer commanding the army, detachment, or garrison, shall prosecute in the name of the United States, but shall so far consider himself as council for the prisoner, after the said prisoner shall have made his plea, as to object to any leading question to any of the witnesses, or any question to the prisoner, the answer to which might tend to criminate himself; and administer to each member of the court before they proceed upon any trial, the following oath, which shall also be taken by all members of the regimental and garrison courts martial.

"You A. B. do swear that you will well and truly try and determine, according to evidence, the matter now before you, between the United States of America, and the prisoner to be tried, and that you will duly administer justice, according to the provisions of "An act establishing rules and articles for the government of the armies of the United States," without partiality, favor or affection; and if any doubt shall arise, not explained by said articles, according to your conscience, the best of your understanding, and the custom of war, in like cases; and you do further swear, that you will not divulge the sentence of the court until it shall be published by the proper authority; neither will you disclose or discover the vote or opinion of any particular member of the court martial, unless required to give evidence thereof as a witness, by a court of justice, in a due course of law. *So help you God.*"

And as soon as the said oath shall have been administered to the respective members, the president of the court shall administer to the judge advocate, or person officiating as such, an oath in the following words:

"You A. B. do swear, that you will not disclose or discover the vote or opinion of any particular member of the court martial, unless required to give evidence thereof as a witness, by a court of justice in due course of law. Nor divulge the sentence of the court to any but the proper authority, until it shall be duly disclosed by the same. *So help you God.*"

Art. 70. When any prisoner arraigned before a general court martial shall, from obstinate and deliberate design, stand mute or answer foreign to the purpose, the court may proceed to trial and judgment as if the prisoner had regularly pleaded not guilty.

Art. 71. When a member shall be challenged by a prisoner, he must state his cause of challenge, of which the court shall, after due deliberation determine the relevancy or validity, and decide accordingly; and no challenge to more than one member at a time shall be received by the court.

Art. 72. All the members of a court martial are to behave with decency and calmness; and in giving their votes, are to begin with the youngest in commission.

Art. 73. All persons who give evidence before a court martial, are to be examined on oath or affirmation in the following form:

"You swear or affirm (as the case may be) the evidence you shall give in the cause now in hearing, shall be the truth, the whole truth, and nothing but the truth. *So help you God*"

Art. 74. On the trials of cases not capital, before courts martial, the deposition of witnesses not in the line or staff of the army, may be taken before some justice of the peace, and read in evidence; provided, the prosecutor and person accused are present at the taking the same, or are duly notified thereof.

Art. 75. No officer shall be tried but by a general court martial, nor by officers of inferior rank, if it can be avoided. Nor shall any proceedings or trials be carried on excepting between the hours of eight in the morning, and three in the afternoon, excepting in cases, which, in the opinion of the officer appointing the court martial, require immediate example.

Art. 76. No person whatsoever shall use any menacing words, signs, or gestures, in presence of a court martial, or shall cause any disorder or riot, or disturb their proceedings, on the penalty of being punished at the discretion of the said court martial.

Art. 77. Whenever any officer shall be charged with a crime, he shall be arrested and confined in his barracks, quarters, or tents, and deprived of his sword, by the commanding officer. And any officer who shall leave his confinement before he shall be set at liberty by his commanding officer, or by a superior officer, shall be cashiered.

Art. 78. Non-commissioned officers and soldiers, charged with crimes, shall be confined until tried by a court martial, or released by proper authority.

Art. 79. No officer or soldier who shall be put in arrest, shall continue in confinement more than eight days, or until such time as a court martial can be assembled.

Art. 80. No officer commanding a guard, or provost martial, shall refuse to receive or keep any prisoner committed to his charge by an officer belonging to the forces of the United States; provided the officer committing, shall, at the same time, deliver an account in writing, signed by himself, of the crime with which the said prisoner is charged.

Art. 81. No officer commanding a guard, or provost martial, shall presume to release any person committed to his charge, without proper authority for so doing, nor shall he suffer any person to escape, on the penalty of being punished for it by the sentence of a court martial.

Art. 82. Every officer or provost marshal, to whose charge prisoners shall be committed, shall within twenty-four hours after such commitment, or as soon as he shall be relieved from his guard, make report in writing, to the commanding officer, of their names, their crimes, and the names of the officers who committed them, on the penalty of being punished for disobedience or neglect, at the discretion of a court martial.

Art. 83. Any commissoned officer convicted before a general court martial of conduct unbecoming an officer and a gentleman, shall be dismissed the service.

Art. 84. In cases where a court martial may think it proper to sentence a commissioned officer to be suspended from command, they shall have power also to suspend his pay and emoluments from the same time, according to the nature and heinousness of the offence.

Art. 85. In all cases where a commissioned officer is cashiered for cowardice or fraud, it shall be added in the sentence, that the crime, name, and place of abode, and punishment of the delinquent, be published in the newspapers, in and about the camp, and of a particular state from which the offender came, or where he usually resides, after which it shall be deemed scandalous for an officer to associate with him.

Art. 86. The commanding officer of any post or detachment, in which there shall not be a number of officers adequate to form a general court martial, shall, in cases which require the cognizance of such a court, report to the commanding officer of the department, who shall order a court to be assembled at the nearest post or detachment, and the party accused, with necessary witnesses, to be transported to the place where the said court shall be assembled.

Art. 87. No person shall be sentenced to suffer death but by the concurrence of two thirds of a general court martial, nor except in the cases herein expressly mentioned; nor shall more than fifty lashes be inflicted on any offender, at the discretion of a court martial, and no officer, non-commissioned officer, soldier, or follower of the army, shall be tried a second time for the same offence.

Art. 88. No person shall be liable to be tried and punished by a general court martial for any offence which shall appear to have been committed more than two years before the issuing of the order for such trial, unless the person by reason of having absented himself, or some other manifest impediment, shall not have been amenable to justice within that period.

Art. 89. Every officer authorised to order a general court martial, shall have power to pardon or mitigate any punishment ordered by such court, except the sentence of death, or of cashiering an officer; which in the cases where he has authority (by article 65) to carry them into execution, he may suspend until the pleasure of the President of the United States can be known; which suspension, together with copies of the proceedings of the court martial, the said officer shall immediately transmit to the President for his determination And the colonel or commanding officer of the regiment or garrison, where any regimental or garrison court martial shall be held, may pardon or mitigate any punishment ordered by such court to be inflicted.

Art. 90. Every judge advocate, or person officiating as such, at any general court martial, shall transmit, with as much expedition as the opportunity of time and distance of place can admit, the original proceedings and sentence of such court martial, to the secretary of war, which said original proceedings and sentence shall be carefully kept and preserved in the office of the said secretary, to the end that the persons entitled thereto may be enabled, upon application to the said office, to obtain copies thereof.

The party tried by any general court martial, shall, upon demand thereof made by himself, or by any person, or persons in his behalf, be entitled to a copy of the sentence and proceedings of such court martial

The following section is extracted from the laws of Congress of 1808.

Sec. 10. *And be it further enacted*, That the officers, non-commissioned officers, musicians, and privates of the said corps, shall be governed by the rules and articles of war, which have been established by the United States in Congress assembled, or by such rules and articles as may be hereafter, by law established; *Provided nevertheless*, That the sentence of general courts martial, extending to the loss of life, the dismission of a commissioned officer, or which shall respect the general officer, shall, with the whole of the proceedings of such cases, respectively, be laid before the President of the United States, who is hereby authorised to direct the same to be carried into execution, or otherwise, as he shall judge proper.

Court *of inquiry*, an assemblage of officers who are empowered to inquire into the conduct of an officer, or to see whether there is ground for a court-martial, &c. Courts of inquiry cannot award punishment, but must report to the officer by whose order they were assembled, Courts of inquiry are also appointed to examine into the quality and distribution of military stores. See Articles of War, §. 91, and 92.

A regimental Court-Martial cannot sentence to the loss of life or limb. The colonel or commanding officer approves the sentence of a regimental court-martial.

A garrison Court-Martial resembles a regimental one in as much as the members are not sworn, and only differs by its being composed of officers of different regiments. The governor, or other commanding officer of the garrison, approves the sentence.

COURTINE, Fr. See Curtain.

COUSSINET *à mousquetaire*, Fr. a bag formerly worn by a French soldier on his left side beneath the cross-belt. It hung upon hooks near the but of his musquet. It likewise signifies a wedge used to support the mortar in its frame.

COUTELAS, *Fr.* See Cutlass.

COUVERT, *Fr.* See Cover.

COUVRE-FACE, *Fr.* a term used by some engineers, and among others by Cohorn, to express the counter-guard: others, particularly Montalembert, convey by *couvre face général* a second line of complete investment.

To COVER, in the mechanical disposition of a battalion, company or squad, only means that a man is to stand in such a position in files, as that when he looks exactly forward to the neck of the man who leads him, he cannot see the second man from him. Nothing but great attention at the drill can bring men to cover so truly as never to destroy the perpendicular direction of any leading body. The least deviation in the men who cover upon either flank of a leading column or division, will throw all that follow out of the true line.

To Cover *ground*, is to occupy a certain proportion of ground individually, or collectively. A foot soldier upon an average covers 22 inches of ground when he stands in the ranks. The dimensions are taken from his sholder points.

A file on horseback covers or occupies in the ranks about 2 feet 8 inches. Thus three file, 8 feet; twelve file will occupy about 32 feet or 10 yards and 2 feet; thirteen file, 34 feet 8 inches, or 11 yards, 1 foot 8 inches; fourteen file, 37 feet 4 inches, or 12 yards 1 foor 4 inches, and so on.

One horse's length from nose to croop, on an average, 8 feet and about 2 inches, or 2 yards 2 feet 2 inches. This consequently will be the space which about three files occupy in front.

Cavalry and infantry officers cannot pay too much attention to the calculation of distances by an accurate knowlege of which, ground will be properly covered, and any proportion of men, on horseback or on foot, be drawn up so as to answer the intentions of an able general. The best way that an officer can form his eye, is to exercise it to the measurement of ground by the regular pace of two feet, used in the military drawing; by this he can calculate his interval exactly, when he once knows how many feet his division occupies; for it is only halving the number of feet, and the number, so produced, is his distance in paces of two feet each. This instruction has been given to cavalry officers, by a very able Tactician.

Cover, a term in war to express security or protection: thus, to land under cover of the guns, is to advance offensively against an enemy who dares not approach on account of the fire from ships, boats or batteries, It likewise signifies whatever renders any movement imperceptible: as, under cover of the night, under cover of a wood, &c. The gallery or corridor in fortification is however, particularly distinguished by the term *Chemin Couvert*, covert way, because the glacis of the parade is its parapet.

COVERT-WAY, in fortification, is a space of 5 or 6 fathoms on the border of the ditch towards the country, covered by a rising ground, which has a gentle slope towards the field. This slope is called the glacis of the covert-way. See Fortification.

Second Covert-way, or as the French call it *avant chemin couvert*, is the covert-way at the foot of the glacis. See Fortification.

CRAB. See Gin.

CRANE, an instrument made with ropes, pullies, and hooks, by which great weights are raised.

CREDITS. See Debts *and Credits*.

CREMAILLE, in field fortification, is when the inside line of the parapet is broken in such a manner as to resemble the teeth of a saw; whereby this advantage is gained, that a greater fire can be brought to bear upon the defile, than if only a simple face were opposed to it; and consequently the passage is rendered more difficult.

Redouts en Cremaillere, or *Cremaille*, are such as are constructed as above mentioned.

CRESSET, any great light upon a beacon, light-house, or watch-tower.

CRETE, in fortification, implies the earth thrown out of the ditch in a fortification, trench, &c. The most elevated part of a parapet or glacis.

CRI *des armes*, Fr. a savage custom which is still preserved by the Turks and other uncivilized nations, whenever they go into action. It was formerly practised among the French, Spaniards, and the English, &c. The national exclamations were Montjoie and St. Dennis for

France, St. James for Spain, St. George for England, St. Malo or St. Yves for the Dukes of Britany, St. Lambert for the principality of Liege, &c. The war-whoop may likewise be considered in this light. It is still practised among the savages of America. See War-whoop.

Every species of noise however is now exploded in Europe. When two armies are upon the point of engaging, a dead silence prevails, the eye and ear of the soldier are rivetted to the word of command; and when he comes into close contact with the enemy, nothing is heard besides the noise of drums, trumpets and cymbals, to which are added the discharge of ordnance and the fire of the musquetry.

In making any desperate assault, or in charging bayonet, or when one battalion is directly opposed to another, or squadron to squadron, the French soldiery frequently use the cri des armes; *tué tué;* and the Spaniards vociferate *amat*. Silence and calmness in the soldier, with steadiness and observation in the officer, are nevertheless superior to such ungovernable effusions. The former must contribute to regularity, the latter seldom fails to create disorder.

CRIQUES, *Fr.* small ditches which are made in different parts of a ground, for the purpose of inundating a country, in order to obstruct the approaches of an enemy.

CROATS, in military history, light irregular troops so called; generally people of Croatia. They are ordered upon all desperate services, and their method of fighting is the same as the Pandours. They wear a short waist-coat, and long white pantaloons, with light boots, a cap greatly resembling the hussar cap. Their arms are a long firelock with rifled barrel, and short bayonet, a crooked hanger, and brace of pistols.

CROCUS, a calcined metal used by the soldiers to clean their musquets, &c.

CROIX *de St. Louis*, Fr. The cross of St. Louis, a French order which was purely of a military nature. It was instituted by Louis, surnamed the Great, in 1693.

In 1719 the number of grand crosses to be distributed in the French army was limited, with appropriate allowances, in the following manner.

445 Commandeurs and chevaliers. 12 grand crosses at 6000 livres, 13 commandeurs at 4000 livres, 27 ditto at 3000, 25 chevaliers at 2000, 38 ditto at 1500, 106 ditto at 1000, 1 ditto at 900, 99 ditto at 800, 45 ditto at 600, 25 ditto at 500, 35 ditto at 400, 5 ditto at 300, and 4 ditto at 200.

The King was Sovereign Grand Master of the order. Land and sea officers wore it promiscuously. The cross consisted of an enamelled golden *fleur de lis* which was attached to the button hole of the coat by means of a small riband, crimson colored and watered

On one side was the cross of St. Louis, with this inscription *Ludovicus Magnus instituit*, 1693; on the reverse side a blazing sword with the following words, *Bellicæ virtutis, præmium.*

This is the only order which could be properly and strictly called military. There were several others during the old French government, which we judge superfluous to the present work.

CROSS, the ensign or grand standard borne by the crusaders in the holy-war.

CROSS-*fire*, in the art of war, is when the lines of fire of two or more adjoining sides of a field-redoubt, &c. cross one another; it is frequently used to prevent an enemy's passing a defile. It may be two ways obtained: first, by constructing the redoubt with the face opposite the defile, tenailled; that is, forming a re-entering angle. The other way is, to defend the defile by 2 redoubts, whose faces command the passage, flanking each other at the same time.

Cross-*bar shot*, shot with iron bars crossing through them, sometimes standing 6 or 8 inches out at both sides: they are used at sea, for destroying the enemy's rigging. At a siege they are of great service in demolishing the enemy's palisading, &c.

Cross-*bars*. See Carriages.

Cross-*bow*, a missive weapon used to propel arrows, &c. previous to the use of gunpowder.

CROTCHET, of cavalry. See Cross.

CROW, an iron bar used as a lever, in moving heavy ordnance, or carriages, &c.

CROWS-*feet*, or Caltrops, in the art of war, are 4 pointed irons, so made that what way soever they fall, one point is always uppermost. The short ones are about 4 inches in length, and the long ones 6 or 7. The short ones are thrown on bridges, &c. and the long ones on the earth, both to incommode the cavalry, that they may not approach without great difficulty.

CROWN-*work*, in fortification, an out work that takes up more ground than any other. It consists of a large gorge, and two sides terminating towards the country in two demi-bastions, each of which is joined by a particular curtain, forming two half bastions and one whole one: they are made before the curtain, or the bastion, and generally serve to inclose some buildings which cannot be brought within the body of the place, or to cover the town gates, or else to occupy a spot of ground which might be advantageous to the enemy. See Fortification.

CROWNED *horned-work*, in fortification, is a horn-work, with a crown-work before it.

CROWNS, in ancient military history, were of various uses and denominations, viz.

Oval Crown, *corona ovalis*, given to a general who, without effusion of blood, had conquered the enemy.

Naval Crown, *corona navalis* distributed to those who first should board an enemy's ship.

Camp Crown, *corona castrensis*, the reward of those who first passed the palisades of, and forced an enemy's camp.

Mural Crown, *corona muralis*, the recompense and mark of honor due to those who first mounted the breach at an assault of a besieged town.

Civic Crown, *corona civica*, more esteemed than the preceding: it was the distinguishing mark of those who had saved the life of a Roman citizen in battle. It was given to Cicero for dissipating the conspiracy of Catiline, and denied to Cæsar, because he embrued his hands in the blood of his fellow citizens.

Triumphal Crown, *corona triumphalis*, the symbol of victory, and presented to a general who gained any signal advantage to the republic.

Grass Crown, *corona graminea* was delivered by the whole Roman people to any general who had relieved an army invested or besieged by the enemy. The other *crowns* were distributed by the emperors and generals; this was given to Fabius by the Roman people, for obliging Hannibal to decamp from Rome,

Olive Crown, *corona oliva*, the symbol of peace, and presented to the negotiators of it.

CROISADE }
CRUSADE } in military history, also called a holy war, barbarous expeditions of the Christians against the Saracens or Turks for the recovery of the holy land, and so called from those who engaged in it wearing a cross on their clothes.

CUBE a solid, consisting of 6 equal square sides. The solidity of any cube is found by multiplying the superficial content of any one of the sides by the height. Cubes are to one another in the triplicate ratio of their diagonals.

Cube-*root*, is the side of one of the squares constituting the cube.

CUBIC *foot*, implies so much as is contained in a cube whose side is 1 foot, or 12 inches.

Cubic *hyperbola*, is a figure expressed by the equation $xy2=a$, having 2 asymptotes, and consisting of 2 hyperbolas, lying in the adjoining angles of the asymptotes, and not in the opposite angles, like the Apollonian hyperbola, being otherwise called, by Sir Isaac Newton, in his *enumeratio linearum tertii ordinis*, an hyperbolismus of a parabola: and is the 65th species of lines, according to him.

Cubic *number*, is that which is produced by multiplying any number by itself, and then again the product by that number.

Cubic *parabola*, a curve of the second order, having infinite legs, diverging contrary ways.

CUE *or* Queue, the hair tied in form of a tail. All the British soldiers, excepting the grenadiers and light infantry, till very lately wore their hair cue'd.

CUIRASSE, a piece of defensive armor, made of plate, well hammered, serving to cover the body, from the neck to the girdle, both before and behind, called breast and back plate.

CUIRASSIERS, in the military art, are a sort of heavy cavalry armed with cuirasses, as most of the German horse are. The several German powers have regiments of cuirassiers, especially the emperor, and the king of Prussia The late king of France had also one regiment; but there were none in the English army since the revolution of 1688.

CUISH, the ancient armor which covered the thighs, was so called.

CUISSARS, *Fr* are plates or scales made of beaten iron, which formerly served to cover the thighs.

CUITE, *Fr.* a technical word to express the preparation of saltpetre for the making of gunpowder. See Saltpetre.

CULASSE, *Fr.* See Breech of a Gun.

CULBUTER, *une Colonne*, to overthrow a column. This term is frequently used when cavalry attack infantry by rapidly charging it.

CULEE *d'un pont*, Fr. Butment of a bridge.

CULVERIN, }
Culverin *ordinary*, }
Culverin *of the largest size*, } See Cannon.

CUNEUS. See Wedge.

CUNETTE. See Culvette.

CURFEW-*bell*, a signal given in cities taken in war, &c. to the inhabitants to go to bed. The most eminent curfew was that in England, established by William the Conqueror, who appointed, under severe penalties, that, at the ringing of a bell, at 8 o'clock in the evening, every one should put out their lights and fires, and go to bed, &c.

CURTAIN, in fortification, is that part of the body of the place, which joins the flank of one bastion to that of the next. See Fortification.

Angle of the Curtain. See Fortification.

Complement of the Curtain. See Fortification.

CURTELASSE, }
CURTELAX, } See Cutlass.

CUSTREL, the shield-bearer of the ancients was so called.

CUT. There are six cuts used by the cavalry, to be made with the broad sword, or sabre. See Sword *Exercise*.

To Cut *off*. To intercept, to hinder from union or return. In a military sense, this phrase is variously applicable, and extremely familiar.

To Cut *off an enemy's retreat*, is to manoeuvre in such a manner as to prevent an opposing army, or body of men, from retiring, when closely pressed, either to their entrenchments, or into a fortified town from which they had marched or sallied. Whole armies may be cut off either through the mismanagement of their own generals, by extending the line of operation too far, or through the superior talents of an individual, who in the midst of the hurry, noise, and desolation, which invariably attend a pitched battle, suddenly takes advantage of some opening in the wings or centre, and cuts off a material part of his enemy's line. When one army is superior to another in numbers, and is commanded by a shrewd and intelligent officer, it may always cut off a part at least of the opposing forces that come into action.

To CUT *short*. To abridge: as the soldiers were cut short of their pay.

To CUT *up*. When the cavalry are sent in pursuit of a flying enemy, the latter are generally cut up.

To CUT *through*. A small body of brave men, headed by a good officer, will frequently extricate itself from apparent captivity, or destruction, by cutting its way through superior force.

CUTLER, a military artificer, whose business is to forge, temper, and mount all sorts of sword blades.

CUTTING-*off*. See RETRENCHMENT.

CUVETTE, in fortification, is a small ditch of 10 or 12 feet broad, made in the middle of a large dry ditch, about 4 or 4½ feet deep, serving as a retrenchment to defend the ditch, or else to let water in, (if it can be had during a siege,) and afford an obstacle, should the enemy endeavor to cross the fosse.

CYCLOPOEDIA. See ENCYCLOPOEDIA.

CYCLOID, a curve in geometry.

CYLINDER, or *concave cylinder of a gun*, is all the hollow length of the piece, or bore. See CANNON.

Charged CYLINDER, the chamber, or that part which receives the powder and ball. See CANNON.

Vacant CYLINDER, that part of the hollow or bore which remains empty when the piece is loaded.

CYMAR, a slight covering; a scarf.

CYMBAL, in ancient military history, a war-like musical instrument in use among the ancients, made of brass and silver. They are derived from Asia, where they are of a variety of sizes. They are now used by the British and other European nations, in their martial music.

CZAR, in military history, a title assumed by the great dukes, or, as they are now stiled, emperors of all the Russias. This title is no doubt, by corruption, taken from *Cæsar*, emperor; and the Czars accordingly bear an eagle, as the symbol of their empire. The first that bore this title was Basil, the son of Basilides, about the year 1470. The Empress is called the Czarina or Tzarina.

D.

DAGGER, in military affairs, a short sword, or poinard, about 12 or 13 inches long. It is not long since, that duellists fought with sword and dagger.

DAGUE, *Fr*. dagger, a short thick poniard which was formerly used when individuals engaged in single combat.

DAM. See DYKE.

DAME, *Fr*. among miners any portion of earth which may remain after the explosion of a mine has taken place. It likewise means a piece of wood with two handles used to press down turf or dirt in a mortar.

DARE, a challenge or defiance to single combat.

DARRAIN. See BATTLE-*array*.

DART, in ancient military history, implies a small kind of lance, thrown by the hand.

DAY, in a military sense implies any time in which armies may be engaged, from the rising of one day's sun to that of another. According to Johnson it signifies the day of contest, the contest, the battle.

DAYSMAN, an umpire of the combat was so called.

DEBANDADE. *A la débandade*, helter-skelter.

Se battre à la débandade, to fight in a loose, dispersed manner.

Laisser à la débandade, to leave at random, or in disorder.

DEBARK. See DISEMBARK.

DEBAUCHER, *Fr*. to debauch or entice a soldier from the service of his country. During the reign of Louis the XV. and in former reigns, it was enacted, that any person who should be convicted of having *débauché* or enticed a soldier from his duty should suffer death. By a late act of the British parliament it is made a capital offence to entice or seduce a soldier from any regiment in the British service.

By the 23d section of the articles of war of the United States, the advising or persuading any officer of the United States army to desert, subjects the adviser to the punishment of death, or such other punishment as a court martial may inflict.

DEBENTURE, is a kind of warrant, given in the office of the British board of ordnance, whereby the person whose name is therein specified, is intitled to receive such a sum of money as by former contract had been agreed on, whether wages, or otherwise. Debenture, in some of the British acts of parliament, denotes a kind of bond or bill, first given in 1649, whereby the government is charged to pay the soldier, creditor, or his assigns, the money due on auditing th account of his arrears. The payments of the board of ordnance for the larger services at home are always made by debentures; and the usual practice has been to make those payments which are said to be in course of office, at a period which is always somewhat more than three months after the date of each debenture, and which can never exceed six: to pay, for instance, at once for the three months of January, February, and March, as early as possible after the 30th of June.

Debentures were generally made up at the Pay-Office by virtue of warrants from the War-Office, with the state of regimental charges annexed, after which is issued the final, or clearing warrant. See Warrant.

DEBLAYER *un Camp*, Fr. To evacuate a camp for the purpose of cleaning and purifying the ground.

DEBTS and *Credits*. Every captain of a troop or company in the British service is directed to give in a monthly statement of the *debts and credits* of his men; and it is the duty of every commanding officer to examine each list, and to see, that no injustice or irregularity has been countenanced or overlooked in so important an object, as every money matter between officer and soldier most unquestionably is.

DECAGON, in fortification, is a polygon figure, having 10 sides, and as many angles; and if all the sides are equal, and all the angles, it is called a regular decagon, and may be inscribed in a circle. The sides of a regular decagon are, in power and length, equal to the greatest segment of an hexagon inscribed in the same circle, and cut in extreme and mean proportion.

DECAGONE. *Fr.* See Decagon.

To **DECAMP**, to march an army or body of men from the ground where it before lay encamped. It also signifies to quit any place or position in an unexpected manner. See Camp.

DECANUS, in Roman military history, an officer who presided over ten other officers, and was head of the contubernium, or serjeant of a file of Roman soldiers; hence our *Deacons*.

DECHARGEURS, *Fr.* are men appointed to attend the park of artillery, and to assist the non commissioned officers, &c. who are employed on that service. It is the duty of the former to keep a specific account of articles received and consumed, in order to enable the latter to furnish their officers with accurate statements.

To **DECIMATE**, to divide any body of men into as many tenths as the aggregate number will afford, and to make them cast lots for the purpose of being punished.

DECIMATION, in Roman military history, a punishment inflicted upon such soldiers as quitted their post, or behaved themselves cowardly in the field. The names of all the guilty were put into an urn or helmet, and as many were drawn out as made the tenth part of the whole number: the latter were put to the sword and the others saved.

DECIMER, *Fr.* See Decimate.

DECLARATION *of war*, a public proclamation made to the citizens, or subjects of a state, declaring them to be at war with any foreign power, and forbidding all and every one to aid or assist the common enemy, at their peril.

DECLIVITY, as opposed to acclivity, means a gradual inclination, or obliquity reckoned downwards.

DECOMPTE, *Fr.* signifies a liquidation, or balance, which from time to time was made in the old French service, between the captain of a company and each private soldier, for monies advanced, or in hand. In the British service every infantry soldier is settled with on the 24th day in each month. The cavalry is paid every second month. In the American army the soldiers are required to be paid every two months at least.

DECOUVERTE, *Aller à la découverte*, Fr. To patrole. In the old French service, the party ordered to perform this duty, when in a garrison, usually went three miles round the fortifications to pick up stragglers who could not account for themselves, and to secure spies, should any be lurking about.

Aller à la Decouverte, when applied to any party that is detached from the army, signifies to reconnoitre the enemy. Cavalry are usually employed upon this duty.

DECOY, a stratagem to carry off the enemy's horses in a foraging party, or from the pasture; to execute which, you must be disguised, and mix on horseback in the pasture, or amongst the foragers on that side on which you propose to fly: you must then begin, by firing a few shots, which are to be answered by such of your party as are appointed to drive up the rear, and are posted at the opposite extremity of the pasture, or foraging ground; after which they are to gallop from their different stations towards the side fixed for the flight, shouting and firing all the way: the horses being thus alarmed, and provoked by the example of others, will break loose from the pickets, throw down their riders and the trusses, and setting up a gallop, will naturally direct their course to the same side; insomuch that, if the number of them was ever so great, you might lead them in that manner for several leagues together: when you are got into some road, bordered by a hedge, or ditch, you must stop as gently as possible; and without making any noise; the horses will then suffer themselves to be taken without any opposition. It is called in French *Haraux*; and marshal Saxe is the only author that mentions it.

DECOYED, an enemy is said to be

decoyed when a small body of troops draws them into action, whilst the main body lies in ambush ready to act with the greatest effect.

DECURIO, in Roman military history, a commander of ten men in the army, or chief of a decury.

DECURY, ten Roman soldiers ranged under one chief, or leader, called the Decurio.

DEEP, troops are told off in ranks of two, or 3 deep, and on some occasions in 4 or more.

DEFAULTER. See DESERTER.

DEFEAT, the overthrow of an army.

DEFECTION. See MUTINY.

DEFENCE, in fortification, consists of all sorts of works that cover and defend the opposite posts; as flanks, parapets, casemates, and fausse-brays. It is almost impossible to fix the miner to the face of a bastion, till the defences of the opposite one are ruined; that is, till the parapet of its flank is beaten down, and the cannon, in all parts that can fire upon that face which is attacked, is dismounted. See FORTIFICATION.

Active DEFENCE, generally considered, means every species of offensive operation which is resorted to by the besieged, to annoy the besiegers. Such for instance, is the discharge of heavy ordnance from the walls, the emission of shells, and the firing of musquetry. A mass of water may likewise be understood to mean active defence, provided it can be increased according to the exigency of the service, and be suddenly made to overflow the outworks, or entrenchments of the besieging enemy. Mines which are carried beyond the fortifications may likewise be included under this head.

Passive DEFENCE is chiefly confined to inundations, and is effected by letting out water in such a manner, that the level ground which lies round a fortified town or place may be entirely overflowed and become an inert stagnant pool. Mere *submersion* is, in fact, the distinguishing character of this species of defence, which does not afford any other movement than what naturally arises from the greater or lesser elevation of the waters, without the means of urging them beyond a given point.

Distant DEFENCE, consists in being able to interrupt the enemy's movements by circuitous inundations; to inundate, for instance, a bridge, when a convoy is passing, or to insulate batteries, the heads of saps or lodgments which have been made in the covert way is to act upon a distant defence. By this species of defence an enemy's communications may be perpetually intercepted, and his approaches so obstructed as to force him to leave dangerous intervals.

See Belidor's treatise on Hydraulic Architecture.

Line of DEFENCE, represents the flight of a musquet ball from the place where the musqueteers stand, to scour the face of the bastion. It should never exceed the reach of a musquet. It is either fichant or razant: the first is when it is drawn from the angle of the curtain to the flanked angle; the last, when it is drawn from a point in the curtain, razing the face of the bastion

Line of DEFENCE is the distance between the salient angle of the bastion, and the opposite flank; that is, it is the face produced to the flank. See FORTIFICATION.

DEFENCE *of rivers*, in military affairs, is a vigorous effort to prevent the enemy from passing; to effect which, a careful and attentive officer will raise redoubts, and if necessary join curtains thereto: he will place them as near the banks as possible, observing to cut a trench through the ground at the windings of the river, which may be favorable to the enemy, and to place advanced redoubts there, to prevent his having any ground fit to form on, &c. See RIVERS.

To be in a posture of DEFENCE, is to be prepared to oppose an enemy, whether in regard to redoubts, batteries, or in the open field.

To **DEFEND**, to fortify, secure, or maintain a place or cause.

DEFENSE, *Fr.* See *Ligne de* DEFENSE.

DEFENSE, Fr. *être en de défense*, technically signifies to be in a state of defence, or able to resist. The French usually say: *Cette redoute est en défense*. This redoubt is in a state of defence.

DEFENSES *d'une place*, Fr. See DEFENCE in FORTIFICATION.

DEFENSIVE, serving to defend; in a state or posture of defence.

DEFENSIVE-*war*. See WAR.

DEFIANCE. See CHALLENGE.

DEFICIENT, wanting to complete, as when a regiment, troop, or company has not its prescribed number of men.

DEFILE, in military affairs, a strait narrow passage, or road, through which the troops cannot march, otherwise than by making a small front, and filing off; so that the enemy may take an opportunity to stop, or harrass their march, and to charge them with so much the more advantage, because the rear cannot come up to the relief of the front.

To DEFILE, is to reduce divisions or platoons into a small front, in order to march through a defile; which is most conveniently done by quarter facing to either the right or left, and then covering to either right or left, and marching through by files, &c. It has been mentioned by a writer on military manœuvres, that defiling should be performed with rapidity, for this obvious reason, that a body of men which advances towards, or retires from an approaching enemy, may get into line, or into columns prepared for action, without loss of time. There may, however, be exceptions to this general rule. For instance, if the regiment is passing a bridge, either retreating or advancing, and the bridge is not firm, the pressure upon it must be as little as possible; because if it should break down, the regiment is suddenly separated, and the remainder may be cut to pieces. In passing a common defile the pace must be proportioned to the nature of the ground.

DEFILING *a lodgment*. See ENFILADE.

DEFORMER, *Fr.* in a military sense, signifies to break: as *déformer une' colonne*, to break a column.

DEFY. See CHALLENGE.

DEGAST, *Fr.* the laying waste an enemy's country, particularly in the neighborhood of a town which an army attempts to reduce by famine, or which refuses to pay military exactions.

DEGORGEOIR, *Fr.* a sort of steel pricker used in examining the touch-hole of a cannon; called a priming wire.

DEGRADATION, in a military life, the act of depriving an officer for ever of his commission, rank, dignity, or degree of honor; and taking away, at the same time, title, badge, and every other privilege of an officer.

DEGRADER, *Fr.* To degrade. The character of a soldier in France was formerly, and we presume still is, so scrupulously watched, that criminals were never delivered over to the charge of the civil power, or sent to be executed, without having been previously degraded; which was done in the following manner:

As soon as the serjeant of the company to which the culprit belonged, had received orders from the major of the regiment, to degrade and render him incapapable of bearing arms; he accoutred him cap-a-pied, taking care to place his right hand upon the but-end of the musquet, while the soldier remained tied. He then repeated the following words: *finding thee unworthy to bear arms, we thus degrade thee.* "Te trouvant indigne de porter les armes, nous t'en dégradons." He then drew the musquet from his arm backwards, took off his cross-belt, sword, &c. and finally gave him a kick upon the posteriors. After which the serjeant retired, and the executioner seized the criminal. See DRUM-OUT.

DEGRE. See DEGREE.

DEGREE. Though this term properly belongs to geometry, nevertheless it is frequently used both in fortification, and gunnery. Hence it will not be improper to state, that it is a division of a circle, including a 360th part of its circumference. Every circle is supposed to be divided into 360°, parts called degrees, and each degree into 60′, other parts, called minutes; each of these minutes being divided into 60″ seconds, each second into thirds, and so on.

DEHORS, in the military art, are all parts of out-works in general, placed at some distance from the walls of a fortification, the better to secure the main places, and to protect the siege, &c. See FORTIFICATION.

DELINEATION, an outline or sketch. See DESIGN.

DELIVER. See SURRENDER.

DEMI-BASTION, or *half-bastion*, is a work with only one face and one flank. See FORTIFICATION.

DEMI-CANNON. See CANNON.

DEMI-CULVERIN, See CANNON.

DEMI-DISTANCE, *des polygones*, Fr. is the distance between the exterior polygons and the angles.

DEMI-DISTANCES, Fr. half distances: as *serrez la colonne à demi-distances*, close to the column at half distances

DEMI-FILE, *Fr.* is that rank in a French battalion, which immediately succeeds to the *serre-demi-file*, and is at the head of the remaining half of its depth.

DEMI-LANCE, a light lance or spear.

DEMI-LINE, in fortification, is a work placed before the curtain to cover it and prevent the flanks from being discovered sideways. It is made of two faces, meeting in an outward angle. See FORTIFICATION.

DEMI-GORGE, in fortification, is half the gorge, or entrance into the bastion, not taken directly from angle to angle, where the bastion joins the curtain, but from the angle of the flank to the centre of the bastion; or the angle which the two curtains would make, by their prolongation. See FORTIFICATION.

DEMISSION, *Fr.* Resignation.

DEMOLITION, the act of overthrowing buildings.

DENIZEN, a free man, residing in a country or state, and owing allegiance, as opposed to Alien, which means a person not a citizen, and who owes or acknowleges a foreign allegiance.

DENONCIATEUR *d'un déserteur*, Fr. During the old government of France, a military regulation existed by which any person who discovered a deserter, was entitled to his full discharge, if a soldier: and to one hundred livres, or eleven dollars reward.

DENONCIATEUR, in a general sense, may not improperly be called a military informer. So rigid indeed, were the regulations (even in the most corrupt state of the French government) against every species of misapplication and embezzlement, that if a private dragoon gave information to the commissary of musters of a troop horse that had passed muster, having been used in the private service of an officer, he was entitled not only to his discharge, but received moreover one hundred livres in cash, and became master of the horse and equipage, with which he retired unmolested. It is not mentioned in the publication from which we extract this remark, whether the officer was cashiered, &c. but we presume he was.

One hundred and fifty livres were likewise paid to any dragoon, or soldier who should give information of a premeditated duel; he obtained moreover his discharge.

DENSITY *of bodies*. See MOTION.

DEPASSER (or DEBORDER), *Fr.* To over-run. In oblique movements, particular care should be taken not to afford an enemy that advances on the same points with yourself, the means of outflanking you; which must inevitably happen, should any part of your troops over-run their proper ground. For the instant such an error occurs, your antagonist will only have to form a retired flank, oppose you in front on that part, and charge the remainder in flank, after having cut off all the troops that had over-run.

Se laisser DEPASSER, to suffer yourself to be overtaken.

DEPENSES, *Fr.* In a military sense, implies secret service money.

DEPLOY, to display, to spread out; a column is said to deploy, when the divisions open out, or extend to form line on some one of those divisions.

DEPLOYMENT, or *flank march*, in a military sense, the act of unfolding or expanding any given body of men, so as to extend their front. A *deployment* may be made in various ways. The principal one is, from the close column into line. A battalion in close column may form in line on its front, on its rear, or on any central division, by the *deployment*, or flank march, and by which it successively uncovers and extends its several divisions.

In the passage of an obstacle, parts of the battalion are required to form in close column, and again *deploy* into line; although the division formed upon, continues to be moveable. This, however, depends wholly upon the nature of the ground or country, over which the battalion is marching.

DEPLOYMENT *into line on a front division, the right in front*, is effected by halting that division in the alignement, and all the others in their true situations, parallel and well closed up to it; and then by taking a point for forming upon, and dressing by it in the prolongation of that division. For a minute explanation of the deployments on a rear and central division. See *American Military Library*.

Oblique Deployments differ from those movements, which are made when a battalion stands perpendicular to the line on which it is to form. These *deployments* are frequently made on an oblique line advanced, on an oblique line retired: and when the close column halted is to form in line in the prolongation of its flank, and on either the front, rear, or central division. See *Am. Mil. Lib.*

DEPOT, any particular place in which military stores are deposited for the use of the army. In a more extensive sense, it means several magazines collected together for that purpose. It also signifies an appropriated fort, or place, for the reception of recruits, or detached parties, belonging to different regiments. During hostilities, the greatest attention should be given to preserve the several *depots* which belong to the fighting army. Hence the line of operation should be invariably connected with them; or rather no advance should be made upon that line, without the strictest regard being paid to the one of communication.

DEPOT is also used to denote a particular place at the tail of the trenches, out of the reach of the cannon of the place, where the troops generally assemble, who are ordered to attack the out-works, or support the troops in the trenches, when there is reason to imagine the besieged intend making a vigorous sally.

DEPOT, likewise means a temporary magazine for forage, for fascines, gabions, tools, and every other thing necessary for the support of an army, or for carrying on a siege.

DEPOUILLE, Fr. *mettre en dépouille*, is an expression made use of in casting of cannon, and signifies to strip it of the matting, clay, &c.

DEPOUILLES *de l' ennemi*, Fr. See SPOILS.

DEPRESSION, the placing of any piece of ordnance, so that its shot be thrown under the point blank line.

DEPRESSED *gun*, any piece of ordnance having its mouth depressed below the horizontal line.

DEPTH *of a battalion or squadron*, in military affairs, the number of ranks, or the quantity of men. Infantry were formerly drawn up 6 or 8 deep, that is, it consisted of so many ranks; but now the line of infantry are generally drawn up only 3 deep, and in defence of a breast-work but two deep. When infantry is drawn up 3 deep, the first rank is called the front rank; the second, the centre rank; and the third, the rear rank; and the files which bind the right and left, are called the flanks. The cavalry is drawn up 2 deep.

DEPTH, a technical word peculiarly applicable to bodies of men drawn up in line or column.

DEPTH *of formation*. The fundamental order of the infantry in which they should always form and act, and for which all their various operations and movements are calculated, is *three ranks*. The formation in *two ranks* is regarded as an occasional exception that may be made from it, where an extended and covered front is to be occupied, or where an irregular enemy, who deals only in fire, is to be opposed. The formation in two ranks, and at open files, is calculated only for light troops in the attack and pursuit of a timid enemy, but not for making an impression on an opposite regular line, which vigorously assails, or resists.

Depth is not only applicable to men drawn up in line, and standing at close, or open files two or three *deep*, but it may likewise signify the relative depth of an army marching towards any given object, in desultory columns.

DEPUTY, a term given to persons employed in the civil departments of the army, and subject to superior trusts.

Deputy *pay-masters*.

Deputy *muster-masters*.

Deputy *commissaries*.

Deputy *judge-advocate*.

DEROUTE, *Fr.* The total overthrow of an army, battalion, or of any armed party. See Defeat.

To DESCEND, signifies to leave any position on an eminence for immediate action.

To Descend *upon*, to invade. When an enemy from surrounding heights suddenly marches against a fortified place, he is said to descend upon it. The term is also applied to troops debarking from their ships for the purpose of invasion.

DESCENT. Hostile invasion of any state or kingdom.

DESCENTES, *dans le fossé*, Fr. See Descents *into the ditch*.

Descents *into the ditch*, are cuts and excavations which are made by means of saps in the counterscarp beneath the covert way. They are covered with thick boards and hurdles, and a certain quantity of earth is thrown upon the top, in order to obviate the bad effects which might arise from shells, &c.

When the ditch or fossé is full of water, the *descent* must be made to its edge, after which the ditch must be filled with strong fascines covered with earth. When the ditch is dry, the saps are carried on to the bottom, and traverses are made in order to secure a lodgment, or to render the approaches of the miner more practicable. When the ditch or fossé which is full of water, has little or no bank, the *descent* is simply made over it, care being taken to cover its enfilade or range with blinds and chandeliers, or to execute it as much out of that line as possible.

Descents, in fortification, are the holes, vaults, and hollow places, made by undermining the ground.

DESCRIPTION, *Signalement*, Fr. The description of a man's person, his appearance, &c. It not only signifies the figure, but an exact and specific detail of such marks and prominent features, that by comparing the copy taken on paper with the original, the latter may be instantly recognised. It is the custom in all well regulated armies for every regiment to have an exact description of each man that belongs to it, specifically drawn out in the adjutant's books. So that when a soldier deserts, a copy is instantly taken, and forwarded to those places to which he is most likely to resort.

DESERTER, in a military sense, a soldier who, by running away from his regiment, troop, or company, abandons the service.

Deserters. A prudent officer will always be cautious of what he entrusts to a deserter; the judgment of the officer and his knowlege of human character, are the only guides which he has in his conduct; the motives of the deserter are therefore to be considered, whether it was the result of depravity in himself or of causes which might affect a generous mind. In this case, however, he should be as cautious as if it proved to be depravity only. A deserter on reaching the lines is put under arrest and conducted to the commanding officer, where he is examined, and it is usual to notify him he will be punished with death as a spy if he gives false information. Though great caution is required in regard to the information given by deserters, great advantage may be derived from their information, as attacks premeditated, the positions of officers, corps, and magazines, and head quarters, of discontents in the army, or disagreements among the superior officers.

Deserters from the militia may be apprehended by any person in the same manner, that deserters are from the regular army. Persons apprehending a deserter are entitled to 10 dollars.

Penalty of Desertion. All officers and soldiers, who having received pay, or having been duly enlisted in the U. S. service, shall be convicted of having deserted the same, shall suffer death or such other punishment as by a court-martial shall be inflicted. *Art. War*, § 20, 21, 22, 23.

Any non commissioned officer or soldier, who shall, without leave from his commanding officer, absent himself from his troop or company, or from any detachment with which he shall be commanded, shall, upon being convicted thereof, be punished according to the nature of the offence, at the discretion of a court-martial.

No non commissioned officer or soldier shall inlist himself in any other regiment, troop, or company, without a regular discharge from the regiment, troop, or company in which he last served, on the penalty of being reputed a deserter and suffering accordingly: and in case any officer shall knowingly receive and entertain such non commissioned officer or soldier, or shall not, after his being discovered to be a deserter, immediately confine him, and give notice thereof to the corpse in which he last served, he, the said officer so offending, shall by a court-martial be cashiered.

Whatsoever officer or soldier shall be convicted of having advised any other officer or soldier, to desert our service, shall suffer such punishment as shall be inflicted upon him by the sentence of the court-martial.

Penalty for concealing British DESERTERS, or *buying their arms, clothes*, &c. Provided always, that if any person shall harbor, conceal, or assist any deserter from his majesty's service, knowing him to be such, the person so offending shall forfeit for every such offence, the sum of 5*l.* or if any person shall knowingly detain, buy, or exchange, or otherwise receive, any arms, clothes, caps, or other furniture belonging to the king, from any soldier or deserter, or any other person, upon any account or pretence whatsoever, or cause the color of such clothes to be changed; the person so offending, shall forfeit for every such offence the sum of 5*l.* and upon conviction by the oath of one or more credible witness or witnesses, before any of his majesty's justices of the peace, the said respective penalties of 5*l.* and 5*l.* shall be levied by warrant under the hands of the said justice or justices of the peace, by distress and sale of the goods and chattels of the offender; one moiety of the said first mentioned penalty of 5*l.* to be paid to the informer, by whose means such deserter shall be apprehended; and one moiety of the said last mentioned penalty of 5*l.* to be paid to the informer; and the residue of the said respective penalties to be paid to the officer to whom any such deserter or soldier did belong: and in case any such offender, who shall be convicted, as aforesaid, of harboring or assisting any such deserter or deserters, or having knowingly received any arms, clothes, caps, or other furniture belonging to the king or having caused the color of such clothes to be changed, contrary to the intent of this act, shall not have sufficient goods and chattels, wherein distress may be made, to the value of the penalties recovered against him for such offence, or shall not pay such penalties within 4 days after such conviction; then, and in such case, such justice of the peace shall and may, by warrant under his hand and seal, either commit such offender to the common gaol, there to remain without bail or mainprise for the space of three months, or cause such offender to be publicly whipped at the discretion of such justice.

DESERTEUR, *Fr.* See DESERTER.

DESIGN, in a general sense, implies the plan, order, representation, or construction of any kind of military building, chart, map, or drawing, &c In building, the term *ichnography* may be used, when by design is only meant the plan of a building or a flat figure drawn on paper: when some side or face of the building is raised from the ground, we may use the term *orthography*; and when both front and sides are seen in perspective, we may call it *scenography*.

DESIGNING, the art of delineating or drawing the appearance of natural objects, by lines on a plane.

DESORDE, *Fr.* See DISORDER.

DESTINATION, the place or purpose, to which any body of troops is appointed in order to do or attempt some military service.

To DETACH, is to send out part of a great number of men on some particular service, separate from that of the main body.

DETACHED *pieces*, in fortification, are such out-works as are detached, or at a distance from the body of the place; such as half-moons, ravelines, bastions, &c.

DETACHEMENT, *Fr.* See DETACHMENT.

DETACHMENT, in military affairs, an uncertain number of men drawn out from several regiments or companies equally, to march or be employed as the general may think proper, whether on an attack, at a siege, or in parties to scour the country. A detachment of 2000 or 3000 men is a command for a general officer; 800 for a colonel, 500 for a lieutenant-colonel, 200 or 300 for a major, 80 or 100 for a captain, 40 for a lieutenant or ensign, 12 for a serjeant, and 6 for a corporal. Detachments are sometimes made of intire squadrons and battalions. One general rule in all military projects that depends upon us alone, should be to omit nothing that can insure the success of our detachment and design; but, in that which depends upon the enemy, to trust something to hazard.

DETAIL, *Fr. faire le détail d'une armée, d'une compagnie, ou d'une corps de gens de guerre;* is to keep a strict eye upon every part of the service, and to issue out instructions or orders, that every individual belonging to a military profession may discharge his trust with accuracy and fidelity. *Faire le détail d'une compagnié*, likewise means to make up a company's report, &c.

DETAIL *of duty*, in military affairs, is a roster or table for the regular and exact performance of duty, either in the field, garrison, or cantonments. The general detail of duty is the proper care of the majors of brigade, who are guided by the roster of the officers, and by the tables for the men, to be occasionally furnished. The adjutant of a regiment keeps the detail of duty for the officers of his regiment, as does the serjeant-major that for the non-commissioned, and the latter that for the privates.

DEVASTATION, in military history, the act of destroying, laying waste, demolishing, or unpeopling towns, &c.

DEVELOPPE, *Fr.* to unfold, to unravel; as *Se développer sur la tête d'une colonne*, to form line on the head of a column.

DEVICE, the emblems on a shield or standard.

DEUIL *militaire*, Fr. military mourning.

DEVUIDER, in the *manege*, is applied to a horse that, upon working upon volts, makes his shoulders go too fast for the croupe to follow.

DIABLE. *Fr.* See CHAT.

DIAGONAL, reaching from one angle to another; so as to divide a parallelogram into equal parts.

DIAGONAL MOVEMENTS. See ECHELLON.

DIAMETER, in both a military and geometrical sense, implies a right line passing through the centre of a circle, and terminated at each side by the circumference thereof. See CIRCLE.

The impossibility of expressing the exact proportion of the diameter of a circle to its circumference, by any received way of notation, and the absolute necessity of having it as near the truth as possible, has put some of the most celebrated men in all ages upon endeavoring to approximate it. The first who attempted it with success, was the celebrated Van Culen, a Dutchman, who by the ancient method, though so very laborious, carried it to 36 decimal places: these he ordered to be engraven on his tomb-stone, thinking he had set bounds to improvements. However, the indefatigable Mr. Abraham Sharp carried it to 75 places in decimals; and since that, the learned Mr. John Machin has carried it to 100 places, which are as follows:

If the diameter of a circle be 1, the circumference will be 3.1415926535,8979323846,2643383279,5028841971,6939937510,5820974944,5923078164,0528620899,8628034825,3421170679,+ of the same parts; which is a degree of exactness far surpassing all imagination.

But the ratios generally used in the practice of military mathematics are these following. The diameter of the circle is to its circumference as 113 is to 355 nearly.—The square of the diameter is to the area of the circle, as 452 to 355. The cube of the diameter is, to the solid content of a sphere, as 678 to 355.—The cubes of the axes are, to the solid contents of equi-altitude cylinders, as 452 to 355.—The solid content of a sphere is, to the circumscribed cylinder, as 2 to 3.—

How to find the DIAMETER *of shot or shells.* For an iron ball, whose diameter is given, supposing a 9-pounder, which is nearly 4 inches, say, the cube root of 2.08 of 9 pounds is, to 4 inches, as the cube root of the given weight is to the diameter sought. Or, if 4 be divided by 2.08, the cube root of 9, the quotient 1.923 will be the diameter of a 1-pound shot; which being continually multiplied by the cube root of the given weight, gives the diameter required.

Or by logarithms much shorter, thus: If the logarithm of 1.923, which is .283979, be constantly added to the third part of the logarithm of the weight, the sum will be the logarithm of the diameter. Suppose a shot to weigh 24 pounds: add the given logarithm .283979 to the third part of .460070 of the logarithm 1.3802112 of 24, the sum .7440494 will be the logarithm of the diameter of a shot weighing 24 pounds, which is 5.5468 inches.

If the weight should be expressed by a fraction, the rule is still the same: for instance, the diameter of a 1½ pound ball, or 3-2, is found by adding the logarithm .2839793, found above, to .0586971 1-3 of the logarithm of 2-3, the sum .3426764 will be the logarithm of the diameter required, *i. e.* 2.2013 inches.

As the diameter of the bore, or the calibre of the piece, is made 1-20 part larger than that of the shot, according to the present practice, the following table is computed for this proportion.

DIAMETERS *of the shots and calibres of English guns.*

lb.	0	1	2	3	4	5	6	7	8	9	
0	0	1.923	2.423	2.775	3.053	3.288	3.498	3.679	3.846	4.00	diam.
	0	2.019	2.544	2.913	3.2[illegible]4	3.568	3.668	3.861	4.038	4.200	calib.
1	4.143	4.277	4.403	4.522	4.635	4.743	4.846	4.945	5.040	5.131	diam.
	4.349	4.490	4.623	4.748	4.866	4.981	5.088	5.192	5.292	5.368	calib.
2	5.220	5.305	5.388	5.409	5.547	5.623	5.697	5.769	5.839	5.908	diam.
	5.480	5.570	5.661	5.742	5.824	5.893	5.982	6.057	6.129	6.203	calib.
3	5.975	6.041	6.105	6.168	6.230	6.290	6.350	6.408	6.465	6.521	diam.
	6.273	6.343	6.410	6.475	6. 41	6.604	6.666	6.707	6.788	6.846	calib.
4	6.576	6.631	6.684	6.737	6.789	6.640	6.890	6.940	6.989	7.037	diam.
	6.904	6.962	7.018	7.076	7.128	7.182	7.234	7.287	7.338	7.383	calib.

EXPLANATION.

The numbers in the first line of the table are units, and those in the first column of the left side of the table tens; the other numbers, under the one, and opposite to the others, are the respective diameters of shot and calibres. Thus, to find the diameter of the shot, and the calibre of a 24 pr. look for the number 2 on the left-hand side, and for 4 at top; then the number 5.547, under 4, and opposite 2, will be the diameter of the shot in inches and decimals, and the number 58.24, under the first, the calibre of a 24-pounder &c.

DIAMETERS *of the Bullets and Calibres of English musquets.*

	0	1	2	3	4	5	6	7	8	9
0	0	1.671	1.326	1.158	1.05	.977	.919	.873	.835	.803
1	.715	. 51	.730	.711	.693	.677	.663	.650	.637	.626
2	.615	.605	.596	.587	.579	.571	.564	.557	.550	.544
3	.538	.536	.526	.521	.517	.511	.506	.501	.497	.493

The diameter of musquet bores differs about 1-50th part from that of the bullet.

DIAMETER *of powder measures.* See POWDER MEASURES.

DICTATOR, a magistrate of Rome, made in times of exigence and public distress, and invested with absolute authority.

DIFFERENCE. The sum paid by an officer in the British service, when he exchanges from half to full pay. It likewise means the regulation price between an inferior and a superior commission. Officers who retire upon half pay, and take the difference, subject themselves to many incidental disadvantages, should they wish to return into active service.

DIGGING. See MINING.

DIGLADIATION, a combat with swords.

DIGUON, *Fr.* a staff at the end of which is suspended a vane or streamer. This term is properly marine.

DIKE or DYKE, a channel to receive water, also a dam or mound, to prevent inundation. See FORTIFICATION

DIMACHÆ, in ancient military affairs, were a kind of horsemen, answering to the dragoons of the moderns.

DIMICATION See BATTLE.

To **DIMINISH** *or increase the front of a battalion*, is to adapt the column of march or manœuvre according to the obstructions and difficulties which it meets in advancing. This is one of the most important movements, and a battalion which does not perform this operation with the greatest exactness and attention, so as not to lengthen out in the smallest degree, is not fit to move in the column of a considerable corps.

DIRECTEUR *General*, Fr. A military post of nominal importance which was originally instituted by Louis XIV. This charge was entrusted to eight lieutenant generals, four to command and superintend the infantry, and four for the cavalry. They possessed, however, little or no authority over the army in general; being subordinate in some degree to the general officer whose corps they might inspect, and to whom they rendered a correct account of its interior œconomy. They were likewise assisted by Inspectors general. The four directors were afterwards replaced by the inspectors, from a principle of œconomy. The permanent ones of that appellation were: director general of the royal artillery school; director general of military hospitals; director general of fortification; director general of the cavalry; director general of stores.

DIRECTION, in military mechanics, signifies the line or path of a body in motion, along which it endeavors to force its way, according to the propelling power that is given to it.

Angle of DIRECTION, that formed by the lines of direction of two conspiring powers.

Quantity of DIRECTION, a term used by military mathematicians for the product of the velocity of the common centre of gravity of a system of bodies, by the sum of their quantities of matter: this is no ways altered by any collisions among the bodies themselves.

DIRK, a kind of dagger used by military men, and by the highlanders in Scotland.

To **DISARM.** To deprive a soldier of every species of offensive or defensive weapon.

DISARMED. Soldiers divested of their arms, either by conquest, or in consequence of some defection.

DISBANDED, the soldiers of any regiment, who are in a body dismissed from the conditions of their military service.

DISBARK. See DISEMBARK.

DISCHARGE, in a military sense, is the dismissing a soldier from the troop or company he belonged to, either at his own request, or after long services.

This term is also applied to the firing of cannon or musquets, as a discharge of cannon, or of small arms.

DISCIPLINARIAN, an officer who pays particular regard to the discipline of the soldiers under his command

DISCIPLINE, in a military sense, signifies the instruction and government of soldiers.

Military DISCIPLINE, } By *military*
Military Constitution, } *constitution*
is meant, the authoritative declared laws

for the guidance of all military men, and all military matters; and by *discipline* is meant, the obedience to, and exercise of those laws. As health is to the natural body, so is a sound military constitution to the military one; and as exercise is to the first, so is discipline to the last. Bravery will perchance gain a battle; but every one knows that by discipline alone the long disputed prize of a war can be ultimately obtained.

The kingdom of Prussia was a striking example in favor of perfect discipline; for while that state had a strong army, and maintained that army in strict discipline, it had held a very considerable share in the system of Europe.

Marine **DISCIPLINE**, is the training up soldiers for sea service, in such exercises and various positions as the musquet and body may require: teaching them likewise every manœuvre that can be performed on board ships of war at sea, &c.

DISCIPLINE *militaire.* See MILITARY DISCIPLINE.

DISCRETION, *Fr.* discretion. *Se rendre à discrétion*, to surrender at discretion, implies to throw one's self upon the mercy of a victorious enemy. The French likewise say, *les soldats vivent à discrétion dans un pays;* which in familiar English signifies, soldiers live *scot-free* in a country.

To **DISENGAGE**, to clear a column or line, which may have lost its proper front by the overlapping of any particular division, company, or section when ordered to form up. To do this, ground must be taken to the right or left. It is however, a dangerous operation when the army or battalion gets into a line of fire. In that case the files that overlap must remain in the rear, and fill up the first openings.

To **DISENGAGE**, is also to extricate yourself and the men you command from a critical situation. A battalion, for instance, which may have advanced too far during an action, and got between two fires, may, by an able manœuvre, disengage itself.

To **DISENGAGE** *the wings of a battalion.* This is necessary when the battalion countermarches from its centre, and on its centre by files. The battalion having received the word "by wings, inward face," is next ordered "by wings, three side steps to the right, march," by which the wings are disengaged from each other, or this may be done by a quarter face to the right and left after facing inward. In counter-marching, &c. the leading files must uniformly disengage themselves.

To **DISENGAGE**, in fencing, to quit that side of your adversary's blade, on which you are opposed by his guard, in order to effect a cut or thrust where an opportunity may present.

DISMANTLE, to strip a town or fortress of its outworks.

To **DISMANTLE** *a gun.* To render it unfit for use. Guns are frequently dismantled and left upon the field of battle.

DISCOMFIT, defeat, rout, overthrow.

DISCOVERER, a scout; one who is set to descry the enemy.

DISEMBARK, to land from on board any vessel or craft, used to convey troops on the sea.

DISEMBODIED. See DISBANDED.

To **DISEMBODY.** To disband.

DISGARNISH, to take guns from a fortress.

DISLODGE, to drive an enemy from their post or station.

DISMISSED. An officer in the British service may be dismissed generally or specifically. When an officer is dismissed generally, it is signified to him, that there is not any further occasion for his services. When an officer is dismissed specifically, it is expressly notified, that he is rendered incapable of ever serving again. Sometimes, indeed this species of dismissal is attended with public marks of extreme disgrace and degradation. In the Austrian service a colonel has been dismissed at the head of his regiment, and has had his sword broken before him, &c. During the present war the colonel of a militia regiment has not only been rendered incapable of ever serving again, but has been expelled the house of commons for military misconduct. The charges against him, together with the circumstantial proofs of his guilt, and the king's approbation of the sentence were read in the circle of every regiment throughout Great Britain, in 1795, and nothing but a plea of severe indisposition saved the culprit from having the minutes publicly communicated to him at the horse guards.

DISMOUNTING, in a military sense, is the act of unhorsing. Thus, to dismount the cavalry, &c. is to make them alight.

To **DISMOUNT** *cannon*, is to break their carriages, wheels, axle-trees, or any thing else, so as to render them unfit for service. It also implies dismounting by the gin, &c.

DISOBEDIENCE *of orders.* Any infraction, by neglect or wilful omission, of general or regimental orders. It is punishable by the articles of war.

DISPART, in gunnery, is to set a mark on the muzzle ring, so that it may be of an equal height with the base ring: hence a line drawn between them, will be parallel to the axis of the concave cylinder, for the gunner to take aim by it, to hit the mark he is to fire at; for the bore and this imaginary line being parallel, the aim so taken must be true. This exactness cannot be made use of in an engagement, and but very seldom at a siege; for in those cases practice and the eye must be the only guides.

DISPART. The dispart of a gun is the half difference between the diameter of the gun at the base ring, and at the swell of the muzzle. The general dispart of all guns is about the 1-56 part of their length. See the disparts of French and English guns under the word Tangent Scale.

Dispart-*frontlet*. See Frontlet.

To DISPERSE. In a military sense, may be variously understood. In an active one, it signifies to disperse any body of men, armed or unarmed, who may have assembled in an illegal or hostile manner. The cavalry are generally employed on these occasions.

To Disperse, likewise means to break suddenly from any particular order, in line or column, and to repair to some rallying point. Hence to sound the disperse, is to give notice that the battalion or battalions are to retreat from their actual position, in a loose and desultory manner, and to reassemble according to the natural line of formation, taking the colors as their central points to dress by.

DISPLACED, officers in the British service are sometimes displaced from a particular regiment in consequence of misconduct proved upon the minutes of a general court martial; but they are at liberty to serve in any other corps.

To DISPLAY, in a military sense, is to extend the front of a column, and hereby bring it into line. See Deploy.

DISPOSE, to dispose cannon, is to place it in such a manner, that its discharge may do the greatest mischief. For instance, to dispose cannon along the front of the line.

DISPOSITION, in a general sense, is the just placing an army or body of men upon the most advantageous ground, and in the strongest situation for a vigorous attack or defence.

DISPOSITION *de guerre*, Fr. warlike arrangement, or disposition Under this head may be considered the mode of establishing, combining, conducting, and finally terminating a war, so as to produce success and victory.

Wisdom and discretion in council point out the form necessary for the first establishment of a warlike enterprise, or disposition, afford the means of bringing it to a conclusion, and assimilate all the various parts so as to unite the whole.

The following maxims are in the memoirs of general Montecuculi:

1. *Deliberate leisurely, execute promptly.*
2. *Let the safety of your army be your first object.*
3. *Leave something to chance.*
4. *Take advantage of circumstances.*
5. *Use all the means in your power to secure a good reputation.*

The disposition or arrangement of a warlike enterprise may be universal, or particular.

An universal disposition or arrangement of war implies every thing which relates to that system upon an extensive scale; such as the combination of many parts for the ultimate benefit of the whole, &c.

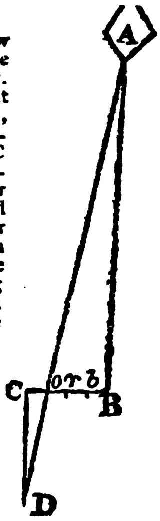
A particular disposition or arrangement of war signifies the detail of minute objects, and the appropriation of various parts, one with another, for the purpose of effecting a general combination. This disposition, (without which the other must prove abortive,) consists in an observance of the strictest discipline by every individual that belongs to a troop or company. To this end, general officers should be scrupulously exact in attending to the inspection of particular corps; specific instructions for regimental œconomy and discipline should be given, and the strictest regard be paid to the execution of orders.

DISTANCE, in military formation, signifies the relative space which is left between men standing under arms in rank, or the intervals which appear between those ranks, &c.

Distances. Inaccessable distances may be found several ways; the most correct of which of course is by means of proper mathematical instruments; which, however, are not always to be had in the field.

The following different methods are laid down by several authors, where instruments cannot be had.

Fig. 1.



1. Wishing to know the distance of the object A from B (fig. 1.) place a picket at B and another at C, at a few fathoms distance, making A B C a right angle, and divide B C into 4, 5, or any number of equal parts: make another similar angle at C, in a direction from the object, and walk along the line C D till you bring yourself in a line with the object A, and any of the divisions, (say *o*) of the line B C. Then, as C*o* : CD : : B*o* : BA.

Vauban.

2. To gain the distance between two objects C and D (fig. 2.) from any point A, taken in the line C D, erect the perpendicular A E: on which set off from A to E, 1 or 200 feet, more or less, according to the distance between the points C and D; set off from E to G in the prolongation A E, one eighth or one tenth of

A E; at G raise the perpendicular G F, and produce it towards I; plant pickets at E and G, then move with another picket on G F till it becomes in a line with E and D: and on the prolongation of the perpendicular F G place another picket at I in the line with E and C; measure F I, and it will be as G E : A E : : F I : C D.

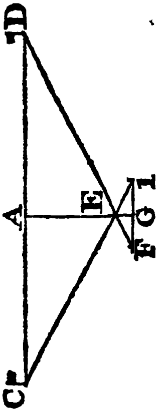


Fig. 2.

3. To gain the inaccessible length A B, (fig. 3.) of the front of a fortification; plant a picket at C, from whence both points may be seen: find the lengths C A and C B by the method just given (No. 1.) make C E ½, or any part of C B, and make C D bear the same proportion to C A: measure D E, then it will be as C D : D E : : C A : A B.

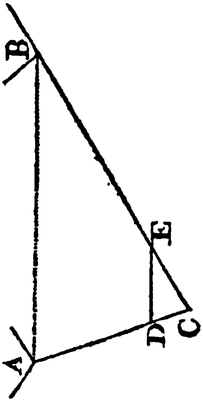


Fig. 3.

See *Am. Mil. Lib*. Article FIELD FORTIFICATION.

Nearly after the same manner may be ascertained the distance from B to A when the point B is accessible; for having measured the line C B, and made the angle C E D equal to C B A, it will be, as C E : D E : : C B : B A.

4. The distance of a battery, or other object, may be ascertained by the tangent scale on the breech of a gun. It is however necessary in this case to know the height of the object, the distance of which is required. Lay the gun by the upper line of metal for the *top* of the object, then raise the tangent scale till the top of the scale and the notch at the muzzle are in a line with the bottom of the object, and note what height of the tangent scale is required: then say, as the length of the scale above the base ring of the gun is to the length from the base ring to the swell of the muzzle, so is the height of the object to its distance from the muzzle of the gun.

5. The breadth of a river, or other short distance, may be taken thus: take two pickets of different lengths, drive the shortest into the ground close to the edge of the bank; measure some paces back from it, and drive in the other till you find, by looking over the tops of both, that your sight cuts the opposite side—Then pull up the first picket, measure the same distance from the second, in any direction the most horizontal, and drive it as deep in the ground as before.—Consequently, if you look over them again, and observe where the line of sight falls, you will have the distance required.

6. The following simple method of ascertaining the breadth of a river may be sufficiently correct for some cases: Place yourself at the edge of one bank, and lower one corner of your hat till you find the edge of it cuts the other bank; then steady your head, by placing your hand under your chin, and turn gently round to some level spot of ground, and observe where your eyes and the edge of the hat again meet the ground: your distance from that point will be nearly the breadth of the river.

7. DISTANCES ascertained by the difference between the true and apparent level. See LEVELLING.

8. DISTANCES measured by sound. See SOUND,

9. The following simple micrometer may be so usefully applied to military purposes, that we shall extract it verbatim from the Philosophical Transactions for 1791, where it is described by Cavallo. This micrometer consists of a thin and narrow slip of mother of pearl, finely divided, and placed in the *focus* of the eyeglass of a telescope, just where the image is formed. It is immaterial whether the telescope be a reflector, or a refractor, provided the eye glass be a *convex* lens and not a *concave* one, as in the Galilean construction. The simplest way to fix

it, is to stick it on the diaphragm, which generally stands within the tube, and in the focus of the eye glass. When thus fixed, if you look through the eye glass, the divisions on the scale will appear very distinct, unless the diaphragm is not exactly in the focus: in which case the scale must be placed exactly in the focus, by pushing the diaphragm, backwards or forwards, when this is practicable; or else the scale may be easily removed from one surface of the diaphragm to the other, by the interposition of a circular bit of paper or card, or a piece of sealing wax. This construction is fully sufficient when the telescope is always to be used by the same person; but when different persons are to use it, then the diaphragm, which supports the micrometer, must be so constructed as to be easily moved backwards or forwards, though that motion need not be greater than about the tenth or eighth of an inch. This is necessary, because the distance of the focus of the same lens appears different to the eyes of different persons; and therefore whoever is going to use the telescope for the mensuration of an angle, must first unscrew the tube which contains the eye glass and micrometer, from the rest of the telescope, and, looking through the eye glass, place the micrometer where the divisions of it may appear most distinct to his eye. The mother of pearl scale may be about the 24th part of an inch broad; its length is determined by the aperture of the diaphragm; its thickness that of writing paper. The divisions on it may be the 200th of an inch, which may reach from one edge of the scale to about the middle; and every fifth and tenth division may be a little longer, the tenths going quite across. When the telescope does not magnify above 30 times, the divisions need not be so minute. For the sake of those not conversant in trigonometry, the following is an easy method of determining the value of the divisions on the scale. Mark upon a wall or other place, the length of 6 inches; then place the telescope before it so that the 6 inches be at right angles to it, and exactly 57 feet 3½ inches distant from the object glass of the telescope. This done, look through the telescope, and observe how many divisions of the micrometer are equal to it, and that same number of divisions will be equal to half a degree, or 30′; and this is all that need be done to ascertain the value of the scale. The reason on which it is founded is, that an extension of six inches at the distance of 57 feet, 3½ inches, subtends an angle of 30′, as is easily calculated by trigonometry. To save the trouble of calculation, a scale may be made requiring only inspection Thus, draw a line equal to the diameter of the field of the telescope, and divide its under side into the same number of parts as are on your micrometric scale, and, by the above operation on the wall, having determined the value of 30′, which we will suppose to correspond with 16 divisions on the scale, mark 30′ o. the opposite side of the line, opposite 16 on the lower; 15 opposite 8, and so on.

By the following table the results may be ascertained by inspection only: thus, suppose an extension of 1 foot is found by the table to subtend an angle of 22′, the distance will be 156.2: and suppose at the distance of 171 8 an object subtends an angle of 20′, its height will be found to be 1 foot; or, suppose an object of 6 feet high to subtend an angle of 20′, the distance is 1030.8, by multiplying 171.8 by 6.

Table of Angles subtended by 1 *Foot, at different Distances.*

Minutes.	Distances in feet.	Minutes.	Distances in feet.	Minutes.	Distances in feet.	Minutes.	Distances in feet.
1	3437.7	16	214.8	31	110.9	46	74.7
2	1718.9	17	202.2	32	107 4	47	73 1
3	1145.9	18	191.0	33	104 2	48	71.6
4	859.4	19	180.9	34	101 1	49	70.1
5	687.5	20	171 8	35	98.2	50	68.7
6	572.9	21	162.7	36	95.5	51	67.4
7	491.1	22	156.2	37	92.9	52	66.1
8	429.7	23	149.4	38	90.4	53	64.8
9	382.0	24	143.2	39	88.1	54	63.6
10	343.7	25	137.5	40	85.9	55	62.5
11	312.5	26	132.2	41	83 8	56	61.4
12	286.5	27	127.2	42	81.8	57	60.3
13	264.4	28	122.7	43	79.9	58	59.2
14	245.5	29	118.5	44	78.1	59	58.2
15	229.2	30	114.6	45	76.4	60	57.3

DISTANCE *of files.* Every soldier when in his true position under arms, shouldered and in rank, must just feel with his elbow the touch of his neighbor with whom he dresses; nor in any situation of movement in front, must he ever relinquish such touch, which becomes in action the principal direction for the preservation of his order, and each file as connected with its two neighboring ones, must consider itself a complete body, so arranged for the purpose of attack, or effectual defence. Close files must invariably constitute the formation of all corps that go into action. The peculiar exercise of the light infantry is the only exception See *Am. Mil. Lib.*

DISTANCE *of ranks*, open distances of ranks are two paces asunder; when close they are one pace; when the body is halted and to fire, they are still closer locked up. Close ranks, order or distance is the constant and habitual order at which troops are at all times formed and move; open ranks, order or distance is only an occasional exception, made in the situation of parade, or in light infantry monoeuvres.

DISTANCES *of files and ranks*, relate to the trained soldier, but in the course o' his tuition he must be much exercised a open files and ranks, and acquire thereby independence and the command of his limbs and body.

DISTANCE *of the bastions*, in fortification, is the side of the exterior polygon. See Fortification.

DISTRIBUTION. In a military sense, generally applies to any division, or allotment, which is made for the purposes of warfare. Thus an army may be distributed about a country. In a more confined sense, it means the minute arrangements that are made for the interior œconomy of corps; as distribution of pay or subsistence, distribution of allowances, &c.

DISTRICT, in a military sense, one of those parts into which a country is divided, for the conveniences of command, and to secure a ready co-operation between distant bodies of armed men.

DITCH. See Fortification, Moat.

To drain a Ditch, is to make the water run off into lower ground, by means of small trenches cut for this purpose.

DIVERSION, in military history, is when an enemy is attacked in one place where he is weak and unprovided, in order to draw off his forces from making an irruption some where else; or where an enemy is strong, and by an able manœuvre he is obliged to detach part of his forces to resist any feint or menacing attempt of his opponent. To derive advantage from a diversion, taken in an extended acceptation of the term, it is necessary, that one state should have greater resources than another; for it would be absurd to attack the territories of another before you had secured your own.

It is likewise requisite, that the country you attack by stratagem or diversion, should be easy of access, and the invasion you make must be prompt, vigorous and unexpected, directed againt a weak and vulnerable quarter. A little good fortune is however essential to render a diversion perfectly successful, as all the ways and means by which it ought be made, cannot be reduced to rule.

The most memorable instance of a diversion well executed, which we meet with in ancient history, was performed by Scipio in Africa, whilst Annibal carried the war into Italy. In 1659, a diversion no less remarkable, was practised by the imperial and allied armies against the Swedes.

DIVISIONS *of a battalion*, are the several platoons into which a regiment or battalion is divided, either in marching or firing; each of which is commanded by an officer.

Divisions *of an army*, are the number of brigades and squadrons it contains.

The advance, the main, and the rear guards are composed out of the several brigades, and march in front, in the centre, and in the rear of an army. Each army has its right wing, its centre, and its wing. When armies march they advance in column, that is, they are divided into several squadrons and battalions of a given depth, successively formed upon one another. If an army be drawn out or displayed in order of battle it is usually divided into the first line, which constitutes the front, the second line, which makes the main body, and the third line or reserve.

DODECAGON, in geometry, is a regular polygon, consisting of 12 equal sides and angles, capable of being regularly fortified with the same number of bastions.

DODECAHEDRON, is one of the platonic bodies, or five regular solids, and is contained under 12 equal and regular pentagons.

The solidity of a *dodecahedron*, is found by multiplying the area of one of the pentagonal faces of it by 12; and this latter product by 1-3d of the distance of the face from the centre of the *dodecahedron*, which is the same as the centre of the circumscribing sphere.

The side of a *dodecahedron* inscribed in a sphere, is the greater part of the side of a cube inscribed in that sphere, cut into extreme and mean proportion.

If the diameter of the sphere be 1,0000, the side of a *dodecahedron* inscribed in it will be .35682 nearly.

All *dodecahedrons* are similar, and are to one another as the cubes of the sides; and their surfaces are also similar, and therefore they are as the squares of their sides; whence as .509282 is to 10.51462, so is the square of the side of any *dodecahedron* to the superficies thereof; and as .3637 is to 2.78516, so is the cube of the side of any *dodecahedron* to the solidity of it.

DOG-*Nails*. See Nails.

DOLPHINS. See Cannon.

DOMMAGE, *Fr.* in a general acceptation of the term, signified in the old French service, the compensation which every captain of a troop, or company was obliged to make in consequence of any damage that their men might have done in a town, or on a march. If any disagreement occurred between the officers and the inhabitants, with respect to the indemnification, a statement of losses sustained was sworn to by the latter, before the mayor or magistrates of the place, who determined the same. But if the officers should refuse to abide by their decision, a remonstrance was drawn up and transmitted to the secretary at war, with a copy of the same to the intendant of the province. Officers have frequently been displaced or degraded on this account. Hence the term dommage is supposed to have been derived from the latin words *damnum jactura*, and signifies the loss or privation of a step.

DONJON. See Dungeon.

DOSSER, in military matters, is a sort of basket, carried on the shoulders of men, used in carrying the earth from one part of a fortification to another, where it is wanted

DOUBLING, in the military art, is the placing two or more ranks, or files into one.

DOUBLE *your ranks*, is for the 2d, 4th, and 6th ranks (when so drawn up) to march into the 1st, 3d, and 5th; so that of 6 ranks they are made but 3; which is not so when they double by half files, because then 3 ranks stand together, and the 3 other come up to double them; that is, the 1st, 2d, and 3d, are doubled by the 4th, 5th, and 6th, or the contrary.

Double *your files*, is for every other file to march into that which is next to it, on the right or left, as the word of command directs; and then the 6 ranks are doubled into 12, the men standing 12 deep; and the distance between the files is double what it was before. By this method 3 files may be doubled into 6, &c.

To **Double** *round*, in military movements, is to march by an inversion of a second line, on the extremity of a first line, thereby to outflank an enemy.

Double *tenaille*. See Tenaille.

DOUILLE, *Fr.* a small iron socket which is at the heel of the bayonet, and receives the extreme end of the musquet, so as to be firmly united together.

Douille likewise signifies, the cavity which belongs to the round piece of iron that is fixed to the end of the ramrod, by means of two nails through two small holes, called *yeux* or eyes, and to which the worm is attached.

DRAGON et **DRAGON VOLANT**, *Fr.* some old pieces of artillery were anciently so called. The *Dragon* was a 40-pounder; the *Dragon Volant* a 32. But neither the name nor the size of the calibre of either piece is now in use.

DRAGONNER, *Fr.* According to the French acceptation of the term, is to attack any person in a rude and violent manner; to take any thing by force; to adopt prompt and vigorous measures; and to bring those people to reason by hard blows, who could not be persuaded by fair words.

DRAGOONS, in military affairs, are a kind of horsemen, or cavalry, who serve both on horseback, and foot; being always ready on every emergency, as being able to keep pace with the horse, and to do infantry duty. In battle, or on attacks, they generally fight sword in hand after the first fire. In the field they encamp on the right and left of the lines. They are divided into brigades, regiments, and squadrons. Their martial music is the clarion or trumpet. The first regiment of dragoons in England was raised in 1681, and called the royal regiment of dragoons of North Britain. This name is derived from the Latin word *Draconarii*, used amongst the Romans. The standard of the Roman cavalry bore as its device a dragon; as that of the infantry bore an eagle.

To **Dragoon**, is to persecute by abandoning a place to the rage of the soldiery.

DRAG-*ropes*. See Ropes. See Bricole.

DRAIN *or* **Drein**, in the military art, is a trench made to draw water out of a ditch, which is afterwards filled with hurdles and earth, or with fascines, or bundles of rushes and planks, to facilitate the passage over the mud. See Trench.

DRAKE, a small piece of artillery.

DRAUGHT, a plan or delineation of any place; a body of troops selected from others.

To **Draught**, to draw forces from one brigade, &c. to complete another; to select a proportion from brigades, regiments, or companies for any particular service.

Draught-*hooks*, in a gun-carriage, are fixed to the transom-bolts on the cheeks of artillery carriages, near the trunnion holes and trails: they are used to draw the guns backwards and forwards by men with drag ropes fixed to those hooks.

DRAUGHTED, the soldiers of any regiment being allotted to complete other regiments are said to be draughted.

DRAUGHTSMEN, a body of men educated to assist the engineers in drawing plans, fortifications, and surveying; every officer should endeavor to be a good draughtsman; and every corps ought to have a master to teach in camp or quarters.

To **DRAW**, to delineate or make a sketch.

DRAW RAMROD, a word of command, used in the drill exercise, on which the soldier draws his ramrod half from the pipes, and seizing it back handed by the middle, waits for the signal for the next motion, when he turns it round, and with an extended arm, places the butt of the rod about one inch in the muzzle of the firelock, in which position he waits for the command *ram down cartridge*.

Draw Swords, a word of command in the sword exercise of the cavalry.

The drawing of swords is performed in 3 motions. 1st, Bring the right hand smartly across the body to the sword knot, which being placed on the wrist, and secured by giving the hand a couple of turns inwards, seize the hilt of the sword. 2d. Draw the sword with an extended arm; sink the hand till the hilt of the sword is immediately againt the left nipple, the blade of the sword perpendicular, and the back of the hand outwards. 3d. Bring down the hilt till in a line with the bridle hand, the blade perpendicular, the edge turned towards the horse's left ear.

Officers of infantry, when the men are under arms, draw their swords without waiting for any word of command.

To DRAW *off*, to retire.

To DRAW *on*, to advance.

To DRAW *out*, to call the soldiers forth in array for action.

To DRAW *up*, to form in battle array.

DRAW *bridge*. See BRIDGE.

DRAWING, in a military sense, is the art of representing the appearances of all kinds of military objects by imitation, or copying, both with and without the assistance of mathematical rules.

DRESS-*military*. The clothing of the army is generally called regimentals, every part of which should facilitate, and not hinder, the various motions of the manual exercise. A soldier, without regard to fashion or taste (to use the words of a modern author) should be dressed in the most comfortable and least embarrassing manner possible; and the keeping him warm, and leaving him the entire use of his limbs, are objects always to be had in view.

To DRESS, in a military sense, is to keep the body in such a relative position, as to contribute towards, and form a part of, an exact continuity of line, upon whatever front, or in whatever shape, the battalion may be formed. Soldiers dress by one another in ranks, and the body collectively dresses by some given object.

DRESSING *of a battalion after the halt*, is to bring all its relative parts in a line with the point, or object, towards which it was directed to move. Whatever correction is necessary, must be made by advancing or retiring the flanks, and not by moving the centre; which, having been the guide in the march, has properly stopped at the point where it has arrived.

DRESSING *of a battalion when it is to retire*, is to have some intelligent officer placed thirty paces in the rear, so as to stand perpendicular to the front directing serjeant, by whom the direction of the march is to be ascertained, as the officer will, of course, be in the line, or nearly so, of the directing serjeants.

DRESSER, *Fr.* See *to* DRESS.

DRINKING to excess in the army is at all times highly criminal, but upon service it ought never to be overlooked; and the consequence will be a trial by a court martial. It has been productive of almost innumerable mischiefs, and is a most detestable and horrid practice. Whatever commissioned officer shall be found drunk on his guard, party, or other duty, under arms, shall be cashiered; any non-commissioned officer or soldier, so offending, shall suffer such corporal punishment as shall be inflicted by the sentence of a court martial. *Art. of War.*

To DRILL, to teach young recruits the first principles of military movements and positions, &c.

To be sent to DRILL, to be placed under the command of the drill officer, or non-commissioned officer, and made to join the recruits in performing the manual and platoon exercise, &c. This is sometimes ordered as a punishment to those who are perfect in their exercise, when a battalion, company, or individual has done something to merit exposure.

DRIVERS *of baggage or artillery*, men who drive the baggage, artillery, and stores, having no other duty in the army.

DRUM, is a martial musical instrument in the form of a cylinder, hollow within, and covered at the two ends with vellum, which is stretched or slackened at pleasure, by means of small cords and sliding leathers. This instrument is used both by infantry and artillery; which is done in several manners, either to give notice to the troops of what they are to do, or to demand liberty to make some proposal to an enemy. Every company of foot or artillery, has two or more drums, according to the effective strength of the party. The drum was first invented by Bacchus, who, as Polyenus reports, fighting against the Indians, gave the signal of battle with cymbals and drums; and the Saracens, who invaded Christendom, introduced the drum into the European armies The various beats are as follow, among the British.

The general, is to give notice to the troops that they are to march.

The assembly, } to order the troops to
The troop, } repair to the place of rendezvous, or to their colors.

The march, to command them to move, always with the left foot first.

Tat-too, to order all to retire to their quarters.

The reveille, always beats at break of day, and is to warn the soldiers to rise, and the centinels to forbear challenging, and to give leave to come out of quarters.

To arms, for soldiers who are dispersed, to repair to them.

The retreat, a signal to draw off from the enemy. It likewise means a beat in both camp and garrison a little before sun-set, at which time the gates are shut, and the soldiers repair to their barracks.

The alarm, is to give notice of sudden danger, that all may be in readiness for immediate duty.

The parley, } is a signal to demand
The chamade, } some conference with the enemy.

DRUM, or DRUMMER, the person who beats the drum.

Kettle-DRUMS, are two sorts of large basons of copper or brass, rounded at the bottom, and covered with vellum or goat-skin, which is kept fast by a circle of iron, and several holes, fastened to the body of the drum, and a like number of screws to stretch it at pleasure. They are used among the horse.

DRUM-*major*, is always that person in the regiment, who beats the best drum, has the command over the other drums, and teaches them their duty. Every regiment has a drum-major.

Drum-Sticks, the sticks with which the drummer beats his drum.

DUEL, is a single combat, at a time and place appointed, in consequence of a cartel or challenge. Duelling was anciently authorised; but the motive of the duellists was the good of their country, when one, or a small number of combatants were chosen to save the blood of a whole army, and decide, by victory or death, the quarrels of kings or nations. Thus it was with Goliah and David, the Horatii and Curatii, and several others.

Duelling was so general a method of determining differences among the nobles, that even ecclesiastics were not excused; only, to prevent their being stained with blood, they procured champions to fight for them. None were excepted from combat, but sick people, cripples, and such as were under 21 years of age, or above 60. Justs and tournaments, doubtless, rendered duels more frequent.

No officer or soldier shall pretend to send a challenge to any other officer or soldier, to fight a duel; if a commissioned officer, on pain of being cashiered; if a non-commissioned officer or soldier, of suffering corporal punishment, at the discretion of a court martial. *Articles of war.*

Pharamond king of the Gauls, in the year 420, issued the following edict against duelling.

" Whereas it has come to our royal notice and observation, that in contempt of all laws, divine and human, it has of late become a custom among the nobility and gentry of this our kingdom, upon slight and trivial, as well as great and urgent provocations, to invite each other into the field, there, by their own hands, and of their own authority, to decide their controversies by combat: we have thought fit to take the said custom into our royal consideration, and find, upon inquiry into the usual causes whereon such fatal decisions have arisen, that by this wicked custom, maugre all the precepts of our holy religion, and the rules of right reason, the greatest act of the human mind, *forgiveness of injuries*, is become vile and shameful; that the rules of good society and virtuous conversation are hereby inverted; that the loose, the vain, and the impudent, insult the careful, the discreet, and the modest; that all virtue is suppressed, and all vice supported, in the one act of being capable to dare to death. We have also further, with great sorrow of mind, observed that this dreadful action, by long impunity, (our royal attention being employed upon matters of more general concern) is become honorable, and the refusal to engage in it ignominious. In these our royal cares and inquiries, we are yet farther made to understand, that the persons of most eminent worth, of most hopeful abilities, accompanied with the strongest passion for true glory, are such as are most liable to be involved in the dangers arising from this licence. Now, taking the said premises into our serious consideration, and well weighing, that all such emergencies (wherein the mind is incapable of commanding itself, and where the injury is too sudden, or too exquisite to be borne) are particularly provided for by laws heretofore enacted; and that the qualities of less injuries, like those of ingratitude, are too nice and delicate to come under general rules; we do resolve to blot this fashion, or wantonness of anger, out of the minds of our subjects, by our royal resolutions declared in this edict, as follows:—No person who either sends or accepts a challenge, or the posterity of either, though no death ensues thereupon, shall be, after the publication of this our edict, capable of bearing office in these our dominions:—The person who shall prove the sending or receiving a challenge, shall receive to his own use and property, the whole personal estate of both parties; and their real estate shall be immediately vested in the next heir of the offenders, in as ample a manner as if the said offenders were actually deceased:—In cases where the laws (which we have already granted to our subjects) admit of an appeal for blood: when the criminal is condemned by the said appeal, he shall not only suffer death, but his whole estate, real, mixed, and personal, shall, from the hour of his death, be vested in the next heir of the person whose blood he spilt:—That it shall not hereafter be in our royal power, or that of our successors, to pardon the said offences, or restore the offenders to their estates, honor, or blood, for ever—Given at our court, at Blois, the eighth of February, 420, in the second year of our reign."

Duelling was authorised before the Normans came into England, but the practice was not so frequent as after the conquest.

DULEDGE, a peg of wood which joins the ends of the felloes, forming the circle of the wheel of a gun carriage; and the joint is strengthened on the outside of the wheel by a strong plate of iron, called the *duledge plate*.

DUMB-BELLS, weights which were used in drilling the soldier, who held one in each hand, which he swung backwards and forwards, to open his chest, increase muscular strength, throw back his shoulders, and accustom him to that freedom of action in the arms, and to that erect position of body which are so essentially necessary to a soldier.

The following method of exercising recruits with the dumb-bells, is extracted from a work entitled Military Instruction.

The dumb-bells being placed one on

each side of the recruit, and himself in an erect, steady posture—on the word,

Raise bells—he will take one in each hand, and by a gentle motion, raise them as high as his arm will suffer him above his head; then gradually sinking them with stretched arm, as much behind him as possible, he will form a circle with them, making the circle complete, by causing the backs of his hands to meet behind his body; this will be repeated according to his strength, 5 or 6 times.

Extend bells.—The bells being raised to the shoulder, they will be forced forwards, keeping the same height, then brought back in the same manner; this will throw the chest forward, and force back the neck and shoulders, this must be frequently repeated.

Swing bells.—The top part of the bells to be made meet together in front, the height of the breast; then forced backwards with an extended arm, and be made to touch behind: in doing this, the palm of the hands must be uppermost, and the elbows well down: this circle must be repeated 14 or 15 times: Time, the circle performed, in 2 seconds.

Ground bells.—The recruit will let fall the bells by his sides, and remain steady and firm.

DUNES, *Fr.* sand hills, commonly called downs. As *les dunes sur la cote de Flandres;* the downs, or sand hills along the coast of Flanders.

DUNGEON, } in *fortification*, is com-
DONJON, *Fr.* } monly a large tower or redoubt of a fortress, whither the garrison may retreat, in case of necessity, and capitulate with greater advantage. Also a dark and secluded place in which prisoners were kept.

DUTY, in a military sense, is the exercise of those functions that belong to a soldier; yet with this nice distinction, that duty is counted the mounting guard, &c. where no enemy is directly to be engaged; for when any body of men marches to meet the enemy, this is strictly called *going upon service.*

On all duties, whether with or without arms, picquets, or courts martial, the tour of duty begins with the eldest downwards. An officer who is upon duty cannot be ordered for any other before that duty is finished, except he be on the inlying picquet, as then he shall be relieved, and go on the duty ordered.

Military Duties may be divided into two general classes, under the heads of Brigade and Regimental *duties.*

Brigade duties, are those which one regiment does in common with another, collectively or by detachments; and of which the brigade major keeps a regular roster.

Regimental Duties, are those which the several companies of a regiment perform among themselves, and of which the adjutant keeps a regular roster.

The following *general regulations* are to be observed, respecting duties in general.

When field or other commissioned officers, are given out at head quarters for one *duty*, they cannot be taken off to be put on any other *duty.*

No officer is allowed to exchange his *duty* with another, after he has been put in orders for it, without leave of the commanding officer of his regiment.

Guards, or detachments, which have not marched off from the parade, are not to be reckoned as for a *duty* done; but, if they should have marched from the parade, it stands for a *duty* done, though they should be dismissed immediately.

If any officer's tour of *duty* for the picquet, general court martial, or *duty* of fatigue, happen when he is on *duty*, he shall not make good such *duty* when he comes off.

No regiment can demand a tour of *duty*, unless it has marched off the place of parade, and beyond the main guard.

General courts martial that have assembled, and the members sworn in, shall be reckoned for a *duty*, though they should be dismissed without trying any person.

Whenever the picquets are ordered to march to any parade, it is not to be accounted a *duty*, unless they march off that parade.

All commands in the regular forces, fall to the eldest officers in the same circumstances, whether of cavalry or infantry, entire, or in parties. In case two commissions, of the same date, interfere, a retrospect is to be had to former commissions, or to lot.

Officers, on all duties under arms, are to have their swords drawn, without waiting for any word of command for that purpose.

E.

EAGLE. *Black*-Eagle, an order of military knighthood in Prussia, instituted by the elector of Brandenburg, in 1701, on his being crowned king of Prussia. The knights of this order wear an orange colored riband, from which is suspended a black eagle.

White-Eagle, is a like order in Poland, instituted in 1325, by Uladislaus V. on occasion of the marriage of his son Casimir to the daughter of the great duke of Lithuania. The knights of this order wear a chain of gold, to which a silver eagle, crowned, is suspended.

The white headed eagle, peculiar to America, is the standard of the United States.

Eagle. The standard of the ancient Romans. In a general sense, it formerly meant the standard of the Roman armies; in a more limited acceptation, the sign or flag of the several legions.

The standard of the German empire

was an eagle with two heads, referring to the eastern and western Roman empires, whose successors they claimed to be, and called themselves *Keisar*, or Cæsar.

The difference between the Roman and the Imperial eagle consists in this, that the first were eagles of gold or silver, fixed at the end of a pike, having their wings extended, and holding the lightning in their claws; the second are eagles painted or embossed upon the colors and standards of the emperors. The eagle likewise signified, in a figurative sense, the German empire, now extinct.

EARL-MARSHAL. An officer who has the care and direction of military solemnities. The dukes of Norfolk are by hereditary right, earls marshal of England

EARTH-*bags* See Bags.

EASE, in a military sense, signifies a prescribed relaxation of the frame, from the erect and firm position which every well dressed soldier should observe. He is, on no account to lounge, or in his common gait so far to give way to an idle fluctuation of his limbs, as to feel himself constrained when he returns to duty. A habit of this sort will gradually gain upon recruits, if they are not corrected during the intervals of drill

To stand at Ease, in a technical acceptation of the term, is to draw the right foot back about six inches, and to bring the greatest part of the weight of the body upon it. The left knee must be a little bent, and the hands brought together before the body, the right hand in front. But the shoulders must invariably be kept back and square, the head to the front, and the whole carriage of the person be unconstrained

In cold weather, when standing at ease, the men are permitted by command, to move their limbs without quitting their ground.

Stand at Ease, (from the support) on this command the soldier retires his right foot 6 inches, bends his left knee, and carrying the right hand smartly across the body, seizes the firelock by the small of the butt, and raises it sufficiently to slope it over his left shoulder, and relieve the left arm from the pressure of the cock. In some corps, instead of seizing the small of the butt with the right hand, they only place the hollow of the hand below the left elbow.

Ease *arms*, a word of command, given immediately after the order, to *handle arms*, by which the soldier is directed to drop his right hand to the full extent of the arm, from the top of the ramrod on the front of the sling, with his fingers spread along it.

EAU, *Fr.* water, is a principal object to be considered, whenever an army advances, retreats, or encamps. It is the quarter master general's business, through his subordinate deputies, to secure this indispensible necessary of life. Small running rivulets are preferable to large rivers, because the latter cannot be so easily turned for the convenience of the army; whereas the former may be always stopped, or diverted from their natural course.

Wells are never resorted to, but in cases of absolute necessity. Stagnant or pond water is in general unwholesome, and rarely limpid or clear.

Haute Eau. High water.

Basse Eau. Low water.

Eaux *Meres* ou Ameres, *Fr.* The water which remains after the first boiling of saltpetre. It has a bitter salt taste, and is used to fill the tubs a second time.

Petites Eaux, *Fr.* The water which remains after the saltpetre has been boiled to a certain degree. See Saltpetre.

ECHANTILLON, *Fr.* means literally a pattern or model. In a military sense, it signifies a plank, which is covered on one side with iron, and serves to finish the mouldings, &c. of a piece of ordnance.

ESCHARPE, *Fr* a scarf. In ancient times, a military mark to distinguish officers and soldiers from the rest of the people. Before a regular clothing was adopted among the nations in Europe, officers and soldiers appeared with two scarfs of different colors, which crossed each other before and behind, in order to point out the country and the corps to which the wearer of it belonged The scarf was preserved among the French, as late down as the reign of Louis the XIVth. It consisted of a piece of white silk, which previous to the revolution, was the national color of France.

Scarfs, however, were continued much later among other nations, particularly among the Germans, who wear them to this day across their uniforms. Cross belts succeed the scarf.

En ECHARPE, in the military art. To batter *en echarpe*, is to fire obliquely, or sideways See Battery.

ECHAUGETTE, in military history, signifies a watch-tower, or kind of centry-box.

ECHELLE, *Fr.* scale. In a mathematical sense, is a straight line drawn double, which is divided into a certain number of parts, each part containing as many toises or yards, &c. as the size of the chart or paper will admit, which are again reduced into feet.

Echelle, *Fr.* ladder, in civil and military architecture, means a machine, which is made of two side pieces or arms, that receive a certain number of small steps, at equal distances from one another. These *echelles* or ladders, are of two kinds: large and small. The small ladders are used to descend into the ditches of fortified places, and the large ones for scaling the walls, &c. See Scaling Ladders.

ECHELLON, Fr. from *echelle*, a ladder. A position in military tactics, where each division follows the preceding one, like the steps of a ladder; and is corvenient in removing from a direct to an oblique, or diagonal line. When troops advance in *echellon*, they almost invariably adopt the ordinary time. Hence to march in *echellon*, may not improperly be said to approach towards any given object by a gradual movement.

ECHELLON *movements and positions*, are not only necessary and applicable to the immediate attacks and retreats of great bodies, but also to the previous oblique or direct changes of situation, which a battalion, or a more considerable corps already formed in line, may be obliged to make to the front or rear, or on a particular fixed division of the line.

The oblique changes are produced by any wheel of less than the quarter circle of divisions from line, which places them in the echellon situation. The direct changes are produced by the perpendicular and successive march of divisions from line to front, or rear. See *Amer. Mil. Lib.*

ECLAIREURS, *Fr.* a corps of grenadiers raised by Bonaparte, in France, who from their celerity of movement were compared to lightning.

ECLOPES, a French military term, to express those soldiers who, though invalids, are yet well enough to follow the army. Among these may be classed dragoons or horsemen, whose horses get suddenly lame, and cannot keep up with the troop or squadron. They always march in the rear of a column.

ECLUSES, *Fr.* See SLUICES.

ECONOMY, in a military sense, implies the minutiæ, or interior regulations of a regiment, troop, or company. Hence regimental economy.

ECORE, *Fr.* steep shore. *Côte en ecore*, signifies a very steep descent

ECOUPE, *Fr.* An instrument used by the pioneers. See OUTILS.

ECOUVILLON, *Fr.* a maulkin or drag. The spunge made use of to clean and to cool the inside of a cannon, when it has been discharged.

ECOUVILLONER, *Fr.* To clean a piece of ordnance before it has been fired, or to cool it after.

ECRETER, *Fr.* To batter or fire at the top of a wall, redoubt, epaulement, &c. so as to dislodge or drive away the men that may be stationed behind it, in order to render the approach more easy. *Ecreter les pointes des palissades*, is to blunt the sharp ends of the palisades. This ought always to be done before you attack the covert way, which is generally fenced by them.

ECU, *Fr.* A large shield which was used by the ancients, and carried on their left arms, to ward off the blows of a sword or sabre. This instrument of defence was originally invented by the Samnites. The Moors had *ecus* or shields, sufficiently large to cover the whole of their bodies. The clipei of the Romans, only differed from the *ecu* in shape; the former being entirely round, and the latter oval.

EDGE. The thin or cutting part of a sword or sabre.

EDICT See PROCLAMATION.

EDUCATION, in a military sense, implies the training up of youth to the art of war; the first object to be considered is, whether nature has given the young man the talents necessary for the profession or not; for here sense, parts, courage, and judgment, are required in a very eminent degree. The natural qualities of an officer are, a robust constitution, a noble open countenance, a martial genius, fire to produce activity, phlegm to moderate his transports, and patience to support the toils and fatigues of war, almost without seeming to feel them Acquired qualities in an officer consist in moral virtues and sciences; by the first is meant, a regular good conduct, economy, prudence, and a serious application to what regards the service. Military sciences indispensibly demand the reading of ancient and modern historians; a good knowlege of military mathematics; and the study of the chief languages of Europe.

It is in ancient authors we find all that is excellent, either in politics or war: the make and form of arms are changed since the invention of gunpowder; but the science of war is always the same. On one hand, history instructs us by examples, and furnishes us with proofs, of the beautiful maxims of virtue and wisdom, which morality has taught us: it gives us a kind of experience, beforehand, of what we are to do in the world; it teaches us to regulate our life, and to conduct ourselves with wisdom, to understand mankind; ever to carry ourselves with integrity and probity, never to do a mean action; and to measure grandeur with the level of reason, that we may despise it when dangerous or ridiculous.

On the other hand, history serves to give us a knowlege of the universe, and the different nations which inhabit it; their prejudices, their governments, their interests, their commerce, their politics, and the law of nations. It shews us the origin of the illustrious men who have reigned in the world, and given birth to their successors.

The knowlege of military mathematics, regards the operations of war in general; every thing there consists in proportion, measure, and motion: it treats of marches, encampments, battles, artillery, fortification, lines, sieges, mines, ammunition, provisions, fleets, and every thing which relates to war; but no perfect notion can be acquired without geometry, natural philosophy, mechanics, military architecture, and the art of drawing.

The study of languages is most useful to an officer, and he feels the necessity of it, in proportion as he rises to higher employments. Thus the Latin, German, and French languages, are very necessary for an English officer; as the English, French, and Italian, are for a German.

French MILITARY EDUCATION. He who undertakes to investigate the causes of the military superiority of the modern French, will, perhaps, be inclined to attach some importance to the facts contained in the following anecdote:

In the course of the winter of 1806, part of the pupils of the *Prytaneum*, at Paris, left that city to receive appointments as officers in the grand army in Poland. The route of these youths, of whom many had not obtained their full stature, and others had a weakly appearance, though they were neither so small nor so weak as were formerly many subalterns in the Prussian army—led them through Berlin. An officer accompanied them in quality of inspector. They passed one night in that capital.

A well-informed inhabitant of the city, who had formerly been in the army, and possessing considerable military attainments, had occasion to be in the neighborhood of their quarters. Their juvenile appearance induced him to ask the officer who accompanied them, whether these youths would be capable of enduring the fatigues and dangers of field encampments in a northern climate, at so inclement a season, and in such a country as Poland. The officer, a polite and sensible man, made this reply:—

"These young men, sir, can scarcely be subjected to any contingency for which they are not perfectly prepared by education and practice. You are mistaken if you imagine that the Emperor Napoleon considers theoretical instruction sufficient for a soldier; our institution goes farther, a great deal farther. All these youths whom you here see, have had much more experience than many officers in actual service in other armies. Their constitution is early inured to all the prejudicial influences which menace the practical soldier. Among these young men there is not one but what has worked with his own hands at the construction of real forts; not one but what has stood centinel whole nights together. All of them have slept many cold and tempestuous nights in the open air, and next day performed a march of 16 or 18 miles; have climbed lofty mountains, beneath the scorching rays of a meridian sun; have swam, sometimes in their clothes, sometimes without, through impetuous rivers and chilling streams; have even been obliged to abstain for whole days from food, and during the hottest weather from drink, that they might learn to endure all possible inconveniences incident to a soldier's life, and that they might be intimately acquainted with them before they were involved in them by necessity. Nothing would terrify them in an uncommon degree: for in the sham fights in our Institution, the rapier is thrown away after the first few hours, and a sharp sword is put into the hands of the pupils. If any of them receive a wound, he has nothing but his own ankwardness to blame for it It is his business to protect himself by his superiority. Would you now repeat your question?"

It is easy to conceive what an effect such a practical education must have upon the soldier in the higher ranks! What may be expected of an officer thus prepared for every event? That the conduct of their leader operates with a powerful impulse on all those who are under his command, is not to be denied. Exercise begets courage and energy, and at a period when war is a trade, those who possess these two qualities in the highest degree, must predominate.

EFFECTIVE *men*, in a military sense, are soldiers fit for service; as an army of 30,000 effective (fighting) men

EFFORT *du Cannon*, Fr. The effect or impression made by a piece of ordnance, which wholly depends upon the manner it is loaded and fired.

EGUILLETTES. Shoulder knots.

To ELANCE, to throw darts, &c.

ELDER *battalion*. A battalion is counted elder than another, by the time since it was raised. See SENIORITY.

ELDER *officer*, is he whose commission bears the oldest date. See SENIORITY.

ELEMENTS, in a military sense, signify the first principles of tactics, fortification, and gunnery.

ELLIPSIS, an oval figure, made by the section of a cone, by a plane dividing both sides of a cone; and though not parallel to the base, yet meeting with the base when produced.

ELEVATION, in *gunnery*, that comprehended between the horizon and the line of direction of either cannon or mortars; or it is that which the chace of a piece, or the axis of its hollow cylinder, makes with the plane of the horizon.

EMBARKATION. The act of putting troops on board of ship, when destined to be conveyed on an expedition.

EMBARKATION. 1. *Of ordnance and stores.*—The first thing necessary is to prepare a list of all the articles to be embarked, with the weight of each. This list must have a large column for remarks. The tonnage required for bulky articles will be generally one third more than their actual weight; but the tonnage of ordnance, shells, shot, &c. will be equal to their weight. If vessels be paid according to the tonnage they carry, the masters will of course stow away as much as the ships will hold; but if, by the voyage, they will be averse to loading their ships too much; a naval officer should therefore always attend to see that the ships are properly stowed.

Ordnance and stores may be embarked either for the purpose of merely transporting them to another situation, or for a military expedition. In the first case, each ship must be stowed with as much as it will carry, and every article that relates to one particular species of service or ordnance, must be put on board the same ship; that in case one ship be lost, the others may remain in themselves complete. This principle must of course be likewise attended to in an embarkation for an expedition; but a more particular distribution must take place of the stores when on board. With each piece of ordnance must be placed every thing necessary for its service; its side arms, carriage, limber, ammunition, &c. so as to be readily come at, when required to be disembarked. If it be an embarkation of ordnance, &c. for a siege, not only every thing necessary for the service of the pieces of ordnance should be arranged with them; but also every thing necessary for the construction of the battery on which they are mounted. It will be adviseable in this case, to put different kinds of ordnance in the same ship, in proportions according to the service required of them. In general it will be best to put the heavy articles in first, and every thing that is light, easy to be removed, or likely to be first wanted, on the top. Previous to embarkation, the guns, carriages, waggons, &c. must be dismounted, but first numbered as follows: and the number of each article marked in the list, in the column of remarks. Give each piece of ordnance and its carriage the same number. Give the ammunition and other carriages, different numbers from the ordnance carriages. Then give every limber, whether of ordnance carriage, ammunition carriage, or waggon, the number of its respective carriage. If for a simple transport, arrange the small stores, side arms, &c. according to their several kinds; but if for an expedition, every thing belonging to each particular piece of ordnance must be collected together, and the cases or chests in which they are put, marked with the number of the piece of ordnance to which they belong, their kinds and description. If there be any doubt of the different parts of the carriages, being made with that uniformity, so essentially necessary, every part which is separated, must bear the number of its carriage. This precaution at any rate may be a good one, if the same vessel contain different kinds of ordnance or carriages.

The axletrees need not be taken off the carriages, if the vessel be of a sufficient size to admit them when fixed, as they are not easily replaced without workmen and a tedious operation. When a carriage is dismounted, all the small articles, such as elevating screws, linch pins, drag washers, cap squares, &c. must be carefully collected, and secured in a box, marked with the description of stores, and number of the carriage to which they [illegible]. All carriages or waggons embarked with their axletrees fixed, must be arranged in the ship, side by side, and alternately front and rear, that their axletrees may not interfere with each other, and take too much room. Every transport or other vessel employed in carrying troops or stores for an expedition, should be numbered on the quarters and on the bows, with figures as large as 2 or 3 feet, and on the sails, that they may be known at a distance. The number of the ship, her name and tonnage, and the master's name should be entered in the list of the stores which she carries.

In disembarking ordnance and stores, they must be landed exactly in order, the reverse of what they were shipped. The carriages and waggons must be mounted as soon as possible, and every kind must be arranged as far from the shore as possible to prevent confusion. If the disembarkation take place in the presence of an enemy, the vessels of course must be loaded accordingly; and the field ordnance, with their carriages, ammunition, &c. must be so arranged as to be first landed, and with the greatest ease possible. In this case, the entrenching tools must also be kept in the greatest readiness.—*Aide Memoire.*

2. *Of troops.*—All transports taken into the public service, are under the direction of the naval agents, and of their agents at the different ports at home and abroad. No troops or other persons can be put on board them, or victualled, but by an order from the navy department, or one of its agents. Troops embarked on board transports or ships of war (except as marines) are only allowed two thirds of a seaman's allowance of provisions. (See the word RATION.) It is therefore necessary to divide the men into messes of 6 each. Six women to 100 men embarked on foreign service, are allowed rations; and 10 women to 100 men on home service. The births on board transports, are usually made 6 feet square, and each admits 4 men at a time; but one third of the men should always be on deck; therefore 6 men (or one mess) are told off to each birth, one third of whom are always on watch. The commanding officer of the troops on board a transport, has a right to peruse the charter party of the ship, which points out every different article, as firing, candles, boats, utensils, &c. which the ship is engaged to find for the use of the troops on board. It likewise expresses the part of the ship allotted to the officers, to the master, the mate, and the agent, should there be one on board.

EMBARGO, a prohibition for any ships to leave a port: generally enforced on the rupture of any two or more nations, or by law.

EMBARK. See EMBARKATION.

EMBARRASS, *Fr.* a cheval de frise.

EMBATTLE. See BATTLE ARRAY.

EMBEZZLING, } of military
EMBEZZLEMENT, } stores, is punishable by the articles of war, but not at the discretion of a general court martial, as the offender must be sentenced to be cashiered.

EMBLEE, *Fr.* a prompt, sudden, and vigorous attack, which is made against the covert way and out works of a fortified place. This military operation is executed by means of a rapid march, and an unexpected appearance before a town, followed by an instantaneous assault upon the out posts of the enemy, who is thrown into so much confusion, that the assailants force their way at the same time, and endeavor to get possession of the town,

EMBOUCHURE *du canon,* Fr. the muzzle of a cannon.

EMBRASSEUR, *Fr.* from embrasser, to embrace or close round. A piece of iron, which grasps the trunnions of a piece of ordnance, when it is aised upon the boring machine, to widen its calibre.

EMBRASURE, in *fortification,* is an opening, hole, or aperture in a parapet, through which cannon is pointed to fire at the enemy. Embrasures are generally made from 10 to 12 feet distant from one another, every one of them being from 6 to 9 feet wide without, and 2 or 2½ within: their height above the platform is 2½ or 3 feet towards the town, and 1½ foot on the other side towards the field, so that the muzzle of the piece may be sunk on occasion, and brought to fire low. See BATTERY and FORTIFICATION.

EMBUSCADE, *Fr.* See AMBUSCADE.

EMERILLON, *Fr.* a mislin, or small piece of brass or cast iron, which does not exceed a pound weight.

EMERY, a ground iron ore. The British soldiers are each allowed a certain quantity for cleaning their arms.

EMIGRANTS, persons who have quitted their native country.

EMINENCE, in military art, a high or rising ground, which overlooks and commands the low places about it: such places, within cannon shot of any fortified place, are a great disadvantage; for if the besiegers become masters of them, they can from thence fire into the place.

EMISSARY, a person sent by any power that is at war with another, for the purpose of creating disaffection among the people of the latter.

EMOUSSER, *Fr.* to blunt, to dull. In a military sense, it signifies to take off the four corners of a battalion, which has formed a square, and to give it, by those means, an octagon figure; from the different obtuse angles of which it may fire in all directions.

EMPALE. See FORTIFY.

EMPATTEMENT, in *fortification.* See TALUS.

EMPILEMENT, *Fr.* from empiler, to pile up. The act of disposing balls, grenades, and shells, in the most secure and convenient manner. This generally occurs in arsenals and citadels.

EMPRIZE. See EXPEDITION.

EMULATION, in a military sense, is a noble jealousy, without the slightest tincture of envy, whereby gentlemen endeavor to surpass each other in the acquisition of military knowledge. Is not the want of encouragement to excite emulation, the great cause of misconduct among military men? An officer who is not protected, who is never sure of the least favor, neglects himself, and takes less trouble to acquire glory, rarely heard of, though merited by the bravest actions, than to enjoy the tranquillity of an ordinary reputation. Brave actions, by whomsoever accomplished, should never be buried in oblivion, as they excite to emulation, and are full of instruction.

ENAMBUSH. See AMBUSH.

ENCAMPMENT, the pitching of a camp. See CAMP.

In the regulations published by authority, are particularly enjoined the following:

Attentions relative to ENCAMPMENTS. On the arrival of a brigade, or a battalion, on the ground destined for its camp, the quarter and rear guards of the respective regiments will immediately mount; and when circumstances require them, the advanced picquets will be posted. The grand guards of cavalry will be formed, and the horses picqueted. The mens' tents will then be pitched, and till this duty is completed, the officers are on no account to quit their troops or companies, or to employ any soldier for their own accommodation.

Necessaries are to be made in the most convenient situations, and the utmost attention is required in this, and every other particular, to the cleanliness of the camp.

If circumstances will allow the ground on which a regiment is to encamp to be previously ascertained, the pioneers should make these, and other essential conveniences, before the corps arrives at its encampment.

Whenever a regiment remains more than one night in a camp, [illegible] kitchens are to be constructed

No tents, or huts, are to be allowed in front of, or between the intervals of the battalions. A spot of ground for this purpose should be marked by the quarter-master, with the approbation of the commanding officer.

On arriving in a camp which is intersected by hedges, ditches, unequal or boggy ground, regiments will immediately make openings of communication, of 60 feet in width.

The ground in front of the encampment is to be cleared, and every obstacle to the movement of the artillery and troops is to be removed.

Commanding officers of regiments mu

take care that their communication with the nearest grand route is open, and free from any impediments.

ENCEINTE, in *fortification*, is the interior wall or rampart which surrounds a place, sometimes composed of bastions or curtains, either faced or lined with brick or stone, or only made of earth. The *enceinte* is sometimes only flanked by round or square towers, which is called a Roman wall.

ENCLOUER *un canon*, Fr. to spike the cannon

ENCLOUEURE, *Fr.* this term is used in the artillery, to signify the actual state and condition of any thing that has been spiked.

ENCOUNTERS, in military affairs, are combats, or fights, between two persons only. Figuratively, battles or attacks by small or large armies. The marquis de Feuquieres mentions four instances of particular encounters brought on by entire armies, with a design to create a general engagement.

ENCOURAGE. See Animate.

ENCROACHMENT, the advancement of the troops of one nation, on the rights or limits of another.

ENDORMI, *Fr.* asleep; *soldat endormi*, a soldier asleep on guard. See the articles of war, which direct that any centinel who is found asleep during the period of his duty, shall be punished with death.

ENDECAGON, a plain figure of 11 sides and angles.

ENEMY, in a military sense, one who is of an opposite side in war, or who publicly invades a country.

ENFANS *perdus*, forlorn hope, in military history, are soldiers detached from several regiments, or otherwise appointed to give the first onset in battle, or in an attack upon the counterscarp, or the breach of a place besieged; so called (by the French) because of the imminent danger they are exposed to.

ENFILADE, in *fortification*, is used in speaking of trenches, or other places, which may be scoured by the enemy's shot, along their whole length. In conducting the approaches at a siege, care must be taken that the trenches be not *enfiladed* from any work of the place. See Trenches.

To Enfilade, is to sweep the whole length of any work or line of troops, with the shot of artillery or small arms.

ENFILER, *Fr.* to enfilade, is to batter and sweep with cannon shot, the whole extent of a strait line.

ENGAGEMENT, *Fr.* See Enlistment.

Engagement. See Battle.

ENGARRISON, to protect any place by a garrison.

ENGINES, in military mechanics, are compound machines, made of one or more mechanical powers, as levers, pullies, screws, &c. in order to raise, project, or sustain any weight, or produce any effect which could not be easily effected otherwise.

Engine *to drive fuzes*, consists of a wheel with a handle to it, to raise a certain weight, and to let it fall upon the driver, by which the strokes become more equal.

Engine *to draw fuzes*, has a screw fixed upon a three-legged stand, the bottom of which has a ring to place it upon the shell; and at the end of the screw is fixed a hand screw by means of a collar, which being screwed on the fuze, by turning the upper screw, draws out or raises the fuze.

ENGINEER, is commonly applied to an officer who is appointed to inspect and contrive any attacks, defences, &c. of a fortified place, or to build or repair them, &c.

The art of fortification is an art which stands in need of so many others, and whose object is so extensive, and its operations accompanied with so many various circumstances, that it is almost impossible for a man to make himself master of it by experience alone, even supposing him born with all the advantages of genius and disposition possible for the knowlege and practice of that important art. We do not pretend to deny that experience is of greater efficacy, than all the precepts in the world: but it has likewise its inconveniences as well as its advantages; its fruits are of slow growth; and whoever is content with pursuing only that method of instruction, seldom knows how to act upon emergencies of all kinds, because old age incapacitates him from exercising his employment. Experience teaches us, through the means of the errors we commit ourselves, what theory teaches us at the expence of others. The life of man being short, and opportunities of practice seldom happening, it is certain nothing less than a happy genius, a great share of theory, and intent application joined to experience, can make an engineer one day shine in his profession. From whence it follows, that less than the three first of those four qualities, should not be a recommendation for the reception of a young gentleman into a corps of engineers.

The fundamental sciences, and those absolutely necessary, are arithmetic, geometry, mechanics, hydraulics, and drawing. Without arithmetic, it is impossible to make a calculation of the extent, and to keep an account of the disbursements made, or to be made; nor without it can an exact computation be made upon any occasion whatsoever.

Without geometry, it is impossible to lay down a plan or map with truth and exactness, or settle a draught of a fortification, or calculate the lines and angles, so as to make a just estimation, in order to trace them on the ground, and to measure the surface and solidity of their parts.

Mechanics teach us the proportions of the machines in use, and how to increase or diminish their powers as occasion may require; and likewise to judge whether those which our own imagination suggests to us, will answer in practice.

Hydraulics teach us how to conduct waters from one place to another, to keep them at a certain height, or to raise them higher.

How fluently soever we may express ourselves in speaking or writing, we can never give so perfect an idea as by an exact drawing; and often in fortification both are wanted; for which reason the art of drawing is indispensibly necessary for engineers.

To the qualities above mentioned, must be added activity and vigilance; both which are absolutely necessary in all operations of war, but especially in the attack of such places as are in expectation of succours. The besieged must have no time allowed them for consideration; one hour lost at such a juncture often proves irreparable. It is by their activity and vigilance, that engineers often bring the besieged to capitulate, much sooner than they would have done, if those engineers had not pushed on the attack with firmness and resolution. Want of vigilance and activity often proceed from irresolution, and that from weakness of capacity.

As the office of an engineer requires great natural qualifications, much knowlege, study, and application, it is but reasonable that the pay should be proportioned to that merit which is to be the qualification of the person employed: he must be at an extraordinary expence in his education, and afterwards for books and instruments for his instruction and improvement, as well as for many other things; and that he may be at liberty to pursue his studies with application, he must not be put to shifts for necessaries. It should likewise be considered, that if an engineer do his duty, be his station what it will, his fatigue must be very great; and, to dedicate himself wholly to that duty, he should be divested of all other cares.

The word engineer is of modern date in England, and was first used about the year 1650, when one captain Thomas Rudd had the title of chief engineer. In 1600, the title given to engineers, was trench-master; and in 1622, sir William Pelham, and after him sir Francis Vere, acted as trench-masters in Flanders. In the year 1634, an engineer was called camp-master general, and sometimes engine-master, being always subordinate to the master of the ordnance.

At present the corps of *engineers* in *England*, consists of 1 colonel in chief, 1 colonel en second, 1 chief engineer, 5 colonels, 6 lieutenant colonels, 18 captains, 15 captain lieutenants, and captains, 31 lieutenants, 16 second lieutenants.

The establishment of the corps of *invalid engineers*, comprises a colonel, lieutenant colonel, captain, captain lieutenant and captain, first lieutenant, and second lieutenant.

The corps of *engineers in Ireland* consists of a director, colonel, lieutenant colonel, major, captain, captain lieutenant and captain, and 2 first lieutenants.

During the administration of general Washington, the necessity of some military institute, or school, was frequently recommended; and in the administration that followed, the same policy was pursued; particularly at the period of raising the additional army in 1798. In the year 1792, military subjects were very much pressed upon congress, as arising out of the state of the world, and the necessity of being prepared to ward against the dangers which might arise. In 1800, the subject of military defence was discussed, with increased zeal, and a very able and judicious report of the then secretary at war was laid before congress, in which it was proposed to establish a military academy to be divided into four general departments. 1. A fundamental school. 2. A school of artillerists and engineers. 3. A school of cavalry and infantry. 4. A naval school. The objects of this report fell to the ground. In 1802, (16 March) a law was passed, in which it was provided, Sect. 26. That the President of the United States is hereby authorised and empowered, when he shall deem it expedient, to organize and establish a corps of engineers, to consist of one engineer, with the pay, rank, and emoluments of a major; two assistant engineers, with the pay, rank, and emoluments of captains; two other assistant engineers, with the pay, rank, and emoluments of first lieutenants; two other assistant engineers, with the pay, rank, and emoluments of second lieutenants; and ten cadets, with the pay of sixteen dollars per month, and two rations per day: and the President of the United States is, in like manner authorised, when he shall deem it proper, to make such promotions in the said corps, with a view to particular merit, and without regard to rank, so as not to exceed one colonel, one lieutenant colonel, two majors, four captains, four first lieutenants, four second lieutenants, and so as that number of the whole corps shall, at no time, exceed twenty officers and cadets.

Sec. 27. *And be it further enacted*, That the said corps when so organized, shall be stationed at West Point in the state of New York, and shall constitute a military academy; and the engineers, assistant engineers, and cadets of the said corps, shall be subject at all times, to do duty in such places, and on such service, as the President of the United States shall direct.

Sec. 28. *And be it further enacted*, That the principal engineer, and in his absence the next in rank, shall have the superintendance of the said military academy, under the direction of the President of the United States; and the secretary of war is hereby authorised, at the public expence, under such regulations as shall be directed by the President of the United States, to procure the necessary books, implements and apparatus for the use and benefit of the said institution.

This school of engineers of the U. States has been since augmented; and it is proposed to place it at Washington city.

ENGINERY, the act of managing artillery; also engines of war.

ENGUARD. See Guard.

ENLARGEMENT, the act of going or being allowed to go beyond prescribed limits: as the extending the boundaries of an arrest, when the officer is said to be enlarged, or under arrest at large.

ENNEAGON, in *geometry*, or *fortification*, is a figure consisting of 9 angles, and as many sides, capable of being fortified with the same number of bastions.

ENNEGONE. See Enneagon.

ENRANK, to place in orderly or regular rows.

Enrolement, *Fr.* enrollment. This term, according to the military acceptation of it in the French service, differs from the words engagement, enlistment, inasmuch as in some instances, the officer enrolls or enlists a soldier without his consent; whereas in others the soldier is enrolled, after having declared that he voluntarily enlisted.

ENROLLED, } See Inlisted.
ENROLLMENT, }

ENSCONCE, to cover as with a fort.

ENSEIGNE, *Fr.* the colors, originally derived from the Latin word *Insignire*. The French designate all warlike symbols under the term *enseigne;* but they again distinguish that word by the appellations of *drapeaux*, colors, and *étendarts*, standards. *Drapeaux* or colors are particularly characteristic of the infantry; *étendarts* or standards belong to the cavalry. We make the same distinctions in our service. See Colors.

Enseigne *de vaisseau*, Fr. The lowest commissioned officer in the French navy.

ENSHIELD, to cover from the enemy.

ENSIFORM, having the shape of a sword.

ENSIGN, in the military art, a banner, under which the soldiers are ranged according to the different regiments they belong to. See Colors.

Ensign, or *ensign-bearer*, is an officer who carries the colors being the lowest commissioned officer in a company of foot, subordinate to the captain and lieutenant. The word ensign is very ancient, being used both by the Greeks and Romans, amongst both foot and horse. Ensigns belonging to the foot, were either the common ones of the whole legion, or the particular ones of the manipuli. The common ensign of the whole legion was an eagle of gold or silver, fixed on the top of a spear, holding a thunderbolt in his talons as ready to deliver it. That this was not peculiar to the Romans, is evident from the testimony of Xenophon, who informs us, that the royal ensign of Cyrus was a golden eagle spread over a shield, and fastened on a spear, and that the same was still used by the Persian kings. In the rustic age of Rome, the ensigns were nothing more than a wisp of hay carried on a pole, as the word *manipulus* properly signifies. The ensign of the cavalry was a dragon; but there were some of cloth, somewhat like our colors, distended on a staff; on which the names of the emperors were generally depicted. The religious care the soldiers took of their ensigns, was extraordinary: they worshipped them, swore by them (as at present several European powers do) and incurred certain death if they lost them. The Turks and Tartars make use of horses tails for their ensigns, whose number distinguishes the rank of their commanders; for the Sultan has 7, and the Grand Vizier only 3, &c.

ENTERPRIZE, in military history, an undertaking attended with some hazard and danger.

ENTERPRISER, an officer who undertakes or engages in any important and hazardous design. This kind of service frequently happens to the light infantry, light horse, and hussars.

ENTIRE, *or rank* Entire, a line of men in one continued row on the side of each other. When behind each other, they are said to be in file. See Indian *files*.

ENTONNOIR, *Fr.* the cavity or hole which remains after the explosion of a mine. It likewise means the tin-case or port-feu which is used to convey the priming powder into the touch-hole of a cannon.

ENTREPOSTS, *Fr.* magazines and places appropriated in garrison towns for the reception of stores, &c. In a mercantile sense it means an intermediate public warehouse, where goods were deposited, and from whence they might be forwarded to different quarters within or beyond the immediate confines of a country.

ENTREPRENEUR, *Fr.* See Contractor.

ENVELOPE, in fortification, a work of earth, sometimes in form of a single parapet, and at others like a small rampart: it is raised sometimes in the ditch, and sometimes beyond it. Envelopes are sometimes *en zic-zac*, to inclose a weak ground, where that is practicable, with single lines, to save the great charge of horn works, crown works, and tenailles, or where room is wanting for such large works. These sort of works are to be seen at Besancon, Douay, Luxembourg, &c. Envelopes in a ditch are sometimes called sillons, contregardes, conserves, lunettes, &c. which words see.

To **ENVIRON**, to surround in a hostile manner, to hem in, to besiege.

EPAULE, in fortification, denotes the shoulder of a bastion, or the place where its face and flank meet, and form the angle, called the angle of the shoulder. See FORTIFICATION.

EPAULEMENT, in fortification, is a kind of breast work to cover the troops in front, and sometimes in flank. In a siege, the besiegers generally raise an epaulement of 8 or 10 feet high, near the entrance of the approaches, to cover the cavalry, which is placed there to support the guard of the trenches. These works are sometimes made of filled gabions, or fascines and earth. This term is frequently used for any work thrown up to defend the flank of a post, or any other place. It is sometimes taken for a demi-bastion, and at other times for a square orillon to cover the cannon of a casemate. See FORTIFICATION

EPAULETTES, are shoulder knots, worn by officers; those for the officers are made of gold or silver lace, with rich fringe and bullions, those of non-commissioned are of cotton or worsted They are badges of distinction worn on one or both shoulders. When a serjeant or corporal is publicly reduced, the shoulder-knot is cut off by the drum major in the front or circle of the battalion.

Among the French, all the degrees of rank, from a cadet to a general officer, were so minutely marked out by the epaulette, that a common centinel might instantly know what officer approached his station, and could pay the prescribed honors without hesitation or mistake.

All officers above the rank of captain wear two in the United States army and militia; captains wear one on the right shoulder: lieutenants and ensigns on the left; serjeants and corporals wear as captains and lieutenants.

Epaulettes have been introduced into the British navy.

The following are the gradations of rank as distinguished by epaulettes.

Masters and commanders have one epaulette on the left shoulder.

Post captains under three years, one epaulette on the right shoulder.

And after having been post three years, two epaulettes.

Rear admirals have one star on the strap of the epaulette, vice admirals two stars, and admirals three stars.

EPEE, *Fr.* a sword.

EPERON, *Fr.* a spur.

EPICYCLOID, a curve formed by the revolution of the periphery of a circle along the convex or concave part of another circle.

EPIGNARE, *Fr.* a small piece of ordnance which does not exceed one pound in calibre.

EPREUVE, *Fr.* See PROOF.

EPROUVETTE, is a machine to prove the strength of gunpowder. There are different sorts of eprouvettes, according to the fancy of different nations who use them. Some raise a weight, and others throw a shot, to certain heights and distances.

EPTAGON. See HEPTAGON.

EQUANGULAR, having equal angles.

EQUATION, an expression of the same quantity in two dissimilar terms, but of equal value. See ALGEBRA.

EQUERRE, *Fr.* a sort of rule which is absolutely necessary to the miner in order to make his descent at right angles.

EQUERRY, the master of the horse. It likewise means any person who is appointed to attend horses.

EQUESTRIAN *statue*, the inanimate resemblance, in bronze, stone, or marble, of any person mounted on horseback.

EQUESTRIAN *order*, among the Romans, signified their knights or equites; as also their troopers or horsemen in the field; the first of which orders stood in contradistinction to the senators, as the last did to the foot; each of these distinctions was introduced into the state by state cunning.

EQUILIBRIUM, equality of weight or powder.

To **EQUIP**, to furnish an individual, a corps, or an army, with every thing that is requisite for military service, such as arms, accoutrements, uniforms, &c. &c.

EQUIPAGE, in a military sense, is all kinds of furniture made use of by the army; such as

Camp-EQUIPAGE, } are tents, kitchen
Field-EQUIPAGE, } furniture, saddle horses, baggage waggons, bat horses, &c.

EQUIPMENT, the act of getting completely equipped, or supplied with every requisite for military service.

EQUITES, an order of equestrian knights introduced among the Romans by Romulus.

ESCADRON, *Fr.* Squadron. This term is derived from the Italian *scara* or *scadra*, corrupted from the Latin quadrum. Froissart was the first French writer that made use of the word escadron to signify a troop of horse drawn out in order of battle. The term *escadron* is more ancient than *battalion*. See SQUADRON.

ESCALADE. See SCALADE.

ESCALADE *d'un soldat* was used in the old French service to express the act of a soldier who got into a town, camp, or quarters, by scaling the ramparts, &c. When discovered in the act of so doing, the centinels had orders to fire at him; and if apprehended, he was tried and condemned to death.

ESCALE, *Fr.* a machine used to apply the petard.

ESCARMOUCHE, *Fr.* See SKIRMISH.

ESCARPE, is the outward slope or talus of the rampart.

ESCARPMENT. See DECLIVITY.

ESCORT, in the art of war. See CONVOY.

ESCORTS, *Fr.* See CONVOY.

ESCOUADE, *Fr.* in the old French service generally meant the third part of a company of foot or a detachment. Companies were divided in this manner for the purpose of more conveniently keeping the tour of duty among the men.

The word escouade is, however, more specifically applicable to the old distribution of a French artillery company, which was divided into three parts called escouades. The first, containing double the complement of the rest, was composed of 24 artillerists or bombardiers, including two serjeants, two corporals, two anspessades or lance corporals of the same profession, and twenty-four soldiers called *soldats apprentis*. The second escouade was composed of twelve miners or sappers, including one serjeant, one corporal, and one anspessade or lance corporal of the same profession, and twelve *soldats apprentis*.

The third escouade was composed of twelve workmen or artificers in wood or iron attached to the artillery, amongst whom were included one serjeant, one corporal and one anspessade or lance corporal of the same trade, together with twelve *soldats apprentis*. We have corrupted the term and called it squad. See SQUAD.

ESCOUT. See SPY.

ESCUAGE, an ancient feudal tenure by which the tenant was bound to follow his lord to war or to defend his castle.

ESPADON, in old military books, a kind of two-handed sword, having two edges, of a great length and breadth; formerly used by the Spanish.

ESPION, *Fr.* a spy.

ESPLANADE, in fortification, the sloping of the parapet of the covert-way towards the field, and is therefore the same as the glacis of the counterscarp; but begins to be antiquated in that sense, and is now only taken for the empty space between the glacis of a citadel, and the first houses of the town.

ESPONTOON, *Fr.* A sort of half pike. On the 10th of May, 1690, it was ordered by the French government that every espontoon, or half pike, should be 8 feet in length. The colonels of corps as well as the captains of companies always used them in action. The officers of the British army have likewise been provided with this weapon: but it has been replaced by the strait sword in both countries; and is generally exploded.

ESPRINGAL, in the ancient art of war, a machine for throwing large darts, generally called muchettæ.

ESPRIT *de Corps*, Fr. this term is generally used among all military men in Europe. It may not improperly be defined a laudable spirit of ambition which produces a peculiar attachment to any particular corps, company or service. Officers without descending to mean and pitiful sensations of selfish envy, under the influence of a true *Esprit de corps* rise into an emulous thirst after military glory. The good are excited to peculiar feats of valor by the sentiments it engenders, and the bad are deterred from ever hazarding a disgraceful action by a secret consciousness of the duties it prescribes.

ESQUADE. See SQUAD.

ESQUIRE. See ARMIGER.

S'ESQUIVER, *Fr.* to steal away.

ESSES, in the train of artillery, are fixed to draught chains and made in the form of an S, one end of which is fastened to the chain, and the other hooks to the horses harness, or to a staple: they serve likewise to lengthen and piece chains together.

ESSUYER *le feu*, Fr. to remain exposed to the fire of cannon or musquetry.

ESTABLAGE, *Fr.* the harness which is between the two shafts of a cart, and serves to support them.

To **ESTABLISH**, To fix, to settle. It is likewise a technical phrase, to express the quartering of any considerable body of troops in a country. Thus it is common to say: The army took up a position in the neighborhood of——and established its head quarters at ——.

ESTABLISHMENT, in a military sense, implies the quota of officers and men in an army, regiment, troop, or company.

Peace-ESTABLISHMENT, is the reduction of corps to a certain number, by which the aggregate force of a country is diminished, and its expenditure lessened.

War-ESTABLISHMENT, is the augmentation of regiments to a certain number, by which the whole army of a country is considerably increased.

ESTAFFE, contribution money.

ESTIMATE, army estimates are the computation of expences to be incurred in the support of an army for a given time.

ESTOFETTE, a military courier, sent express from one part of an army to another.

ESTOILE. See ETOILE.

ESTRADE, *Fr.* a road or way. This word is derived from the Italian *strada*, which signifies road, street, or way. Some writers take its etymology from *Estradiots*, a class of men on horseback, who were employed in scouring the roads, and in procuring intelligence respecting the movements of an army. See BATTEUR d'ESTRADE.

ETAIM or **ETAIN**, *Fr.* Tin, A white metal of a consistency less hard than silver, but firmer than lead. It is used in the casting of cannon. The best quality is found in Cornwall.

ETANCONS, *Fr.* Stays, supporters. Large pieces of wood which are fixed vertically in the cavities of mines, for the purpose of sustaining the weight of earth that is laid upon the galleries.

ETAPE, *Fr.* subsistence, or a soldier's daily allowance. See SUBSISTENCE.

ETAPIERS, *Fr.* were military purveyors, who accompanied the French armies or were stationed in particular places to supply the troops on their march.

ETAT-*Major*, *Fr.* Staff. Etat major in the French service, is a more comprehensive term than staff appears to be in our acceptation of the word. As we have in some degree adopted the term, it cannot be superfluous to give a short account of its origin, &c. Among the French, according to the Author of the *Recueil Alphabetique de tous les termes propres à l'art de la guerre*, état-major signifies a specific number of officers who are distinguished from others belonging to the same corps. It did not follow that every regiment was to have its staff, as the king had the power of appointing or suppressing staff officers at pleasure.

The *état-major général de l'infanterie*, or the general staff of the infantry, was created under Francis I. in 1525. That of the light cavalry under Charles IX. in 1565. That of the dragoons under Louis XIV. in 1669.

The *état-major* of an infantry regiment, was composed of the colonel, the major, the aid-major, quarter-master, the chaplain, the provost-marshal, the surgeon, and the attendant commissary, who was called *le commissaire à la conduite*. To these were added the lieutenant of the provostship, the person who kept the regimental register, or the greffier, the drum-major, six archers, and the executioner. By this establishment it is presupposed, that a provostship, was allowed in the regiment, which was not a general regulation, but depended upon the king's pleasure.

The *état-major*, or staff of an old French regiment of *cavalry*, according to the *Ordonnance*, or military regulation which was issued on the 4th of November in 1651, consisted of the *mestre de camp*, or colonel of the horse, the major and the aid-major. It is therein particularly stated, that the état-major of a cavalry regiment shall not have a provostship, a chaplain, a surgeon, nor any other subordinate officer under that denomination.

Every fortified town or place had likewise its appropriate état-major, consisting of a certain number of officers who were subject to specific and distinct regulations.

By an order dated the 1st of August, 1733, the officers belonging to the état major of a garrison town, or citadel, were strictly forbidden to absent themselves more than four days from their places of residence, without especial leave from the king, nor for four days, unless they obtained permission from the governor or commandant of the town or citadel. See *Amer. Mil. Lib.* Art. STAFF.

ETENDART. *Fr.* Standard. This word derives its name from the circumstance of its application, being constantly stretched out, *étendu* or displayed. This etymology does not appear to hold good with our translation of the word.

ETERCILLON, *ou arcboutant*, Fr. Buttress. A piece of wood which is placed transverse, or horizontally in the galleries of a mine, in order to sustain the earth on both sides; but most especially to keep the chamber well closed, and to support the corners of the gallery.

ETIQUETTE, a French term, primarily denoting a ticket, or title affixed to a bag, or bundle of papers, expressing its contents. It is also used, when applied to the Spanish and some other courts to signify a particular account of what is to be done daily in the king's household. It likewise denotes those forms that regulate the decorum of conduct towards persons of various ranks and stations. In the Austrian service, military etiquette is punctiliously attended to; and in the old French service the utmost deference was paid to a superior officer by an inferior, at all times, and on all occasions.

ETOILES, *Fr.* small redoubts, which are constructed by means of angles rentrant and angles sortant, and have from five to eight saliant points. Each one of their sides or faces may contain from 12 to 25 toises. This species of fortification has fallen into disuse, not only because etoiles do not possess the advantage of having their angle rentrant effectually flanked, but because they have been superceded by square redoubts, which are sooner built, and are applicable to the same purposes of defence.

ETOUPILLE, *Fr.* an inflammable match, composed of three threads of very fine cotton, which is well steeped in brandy mixed with the best priming gunpowder.

EVACUATE, in military history, a term made use of in the articles of capitulation granted to the besieged at the time they surrender to the besiegers; and is the same as quitting a place.

EVENT, *Fr.* Vent. This word is particularly applicable to the vent or cavity which is left in cannon, or other fire arms, after they have been proved and found defective. The vent is sometimes round and sometimes long. Vents are frequently so exiguous, that they appear like the lines of a small fibre, through which water will ooze, and smoke evaporate. These pieces, whether of ordnance, or of musquetry, are of course rejected.

EVIDENCE, a declaration made *viva voce* of what any person knows of his own knowlege relative to the matter in question. Military men are obliged to attend and give evidence before courts-martial, without any expence to the prosecutor, or prisoner

Hearsay **Evidence**, the declaration of what one has heard from others. As in all other courts of ordinary judicature, this species of evidence is not admissible in courts-martial.

EVOCATI, were a class of soldiers among the Romans, who, after having served their full time in the army, entered as volunteers to accompany some favorite general. Hence they were likewise called *emeriti and beneficiarii.*

EVOCATION. A religious ceremony which was always observed among the Romans, at the commencement of a siege, wherein they solemnly called upon the gods and goddesses of the place to forsake it, and come over to them When any place surrendered, they always took it for granted, that their prayer had been heard, and that the *Dii Penates*, or the household gods of the place had come over to them.

EVOLUTION, in the art of war, the motion made by a body of troops, when they are obliged to change their form and disposition, in order to preserve a post, occupy another, to attack an enemy with more advantage, or to be in a condition of defending themselves the better. That evolution is best, which, with a given number of men, may be executed in the least space, and consequently in the least time possible.

Evolution *of the moderns*, is a change of position, which has always for its object either offence or defence. The essentials in the performance of an evolution are, order, directness, precision, and the greatest possible rapidity.

Evolutions may be divided into two classes, the simple and the compound; simple evolutions are those which consist in simple movements, which do not altar the shape or figure of the battalion, but merely afford a more or less extended front or depth, keep it more or less closed to its flanks or centre, turn its aspeet to flank or rear, or break it into divisions, subdivisions, sections, or files, in order that it may unfold itself, or defile and resume its proper front or order of battle. All the various ways of defiling, forming line, opening to right and left, closing or deploying, doubling the ranks or files, or changing front upon either of the flanks by conversion, are called simple evolution.

Compound evolutions are those which change the shape and figure of battalions, break them into divisions or companies, separate the companies from the main body, and again replace or rejoin them; in a word which afford the means of presenting a front at every direction.

Compound evolutions are practised either by repeating the same simple evolution several times, or by going through several simple evolutions, or moving in different modes with different parts of the same corps, which ultimately tend to the same object.

The **Evolutions** *of the ancients* were formed and executed with uncommon good sense and ability. Considering the depth and size of the Grecian phalanx, it is astonishing how the different parts could be rendered susceptible of the most intricate and varied evolutions. The Roman legion, though more favorable to such changes and conversions, from being more loose and detached, did not execute them upon more sound or better principles.

Evolution *(in geometry)* the equal *evolution* of the periphery of a circle, or any other curve, is such a gradual approach of the circumference to rectitude, as that all its parts do meet together, and equally evolve or unbend; so that the same line becomes successively a less arch of a reciprocally greater circle, till at last they turn into a straight line.

Evolution *of powers (in algebra)* extracting of roots from any given power, being the reverse of involution.

EXAGON. See **Hexagon.**

EXAMINER. One who scrutinizes.

EXCAVATION, the act of cutting or otherwise making hollows; also the cavity formed. In military matters, it is generally applied to the place from whence the earth or other substance has been taken by mining.

EXAMPLE, any act or word which disposes to imitation. The example of a superior officer has considerable influence over the mind of an inferior; but in no instance does it appear more important than in the good and bad behaviour of a non-commissioned officer or corporal. These characters, therefore, should be particularly correct in their duties, tenacious of every principle of military honor, and remarkable for honesty. Old soldiers should likewise direct their attention to the strict observance of rules and regulations, as young recruits always look up to them for example.

EXAMINATION, a scrutiny or investigation of abilities, conduct, &c. All officers of artillery and engineers should undergo an examination in mathematics,, fortification, and gunnery, prior to their having commissions. Surgeons and assistant surgeons should be examined before a medical board.

EXAUCTORATIO, in the Roman military discipline, differed from the missio, which was a full discharge, and took place after soldiers had served in the army 20 years; whereas the exauctoratio was only a partial discharge: they lost their pay indeed, but still kept under their colors or vexilla, though not under the aquila or eagle, which was the standard of the legion: whence instead of *legionarii*, they were called *subsignani*, and were retained till they had either served their full time, or had lands assigned them. The exauctoratio took place after they had served 17 years.

EXCELLENCY, a title absurdly given to kings and emperors, in Europe, and with equal falsehood and absurdity given to governors, ambassadors, generals, and other persons.

EXCHANGE, in a military sense, implies the removal of an officer from one regiment to another, or from full to half pay, and *vice versa*: It is usual on these occasions for individuals belonging to the latter class to receive a pecuniary consideration. See DIFFERENCE.

EXCHANGE *of prisoners*, the act of giving up men, that have been taken in war, upon stipulated conditions which are subscribed to by contending powers.

EXCHANGE, in a general sense, signifies any contract or agreement whereby persons or things are exchanged for others.

EXCHEQUER. The public office from whence all monies are issued for the use of the English army. With respect to the militia, it is enacted that the money paid for that particular service, shall be kept apart from all other money.

Officers belonging to the exchequer, are not to take any fees for receiving, or issuing such money.

EXCITE. See ANIMATE.

EXCUBIÆ, in antiquity, the watches and guards kept in the day by the Roman soldiers. They differed from the *vigiliæ* which were kept in the night.

EXECUTER, *Fr.* The French use this verb technically. They say, *exécuter et servir une pièce*. See the particular method of so doing, under TIRER *le canon*, to fire a gun or cannon.

EXECUTER, *Fr.* to execute, to put to death.

EXECUTION. *Military* EXECUTION is the pillaging or plundering of a country by the enemy's army.

Military EXECUTION also means every kind of punishment inflicted on the army by the sentence of a court martial; which is of various kinds. When a soldier is to be punished with death, a detachment of about 200 men from the regiment he belongs to form the parade, when a file of grenadiers shoots the prisoner to death.

Every nation has different modes of military execution.

EXEMPT, men of 45 years of age are exempt from serving in the militia. An aid-de-camp and brigade major are exempt from all regimental duties while serving in these capacities. Officers on courts martial are sometimes exempt from all other duties until the court is dissolved. The people called *Quakers*, and all others who are religiously scrupulous, are by the laws of the U. States exempt from militia duty, an indulgence which they have hitherto repaid with extreme ingratitude

EXEMPTION, the privilege to be free from some service or appearance. Thus officers in the British militia who have served during the war, according to prescribed regulations, are exempted from being balloted for.

EXEMTS, *Fr.* so called originally, from being exempted from certain services, or entitled to peculiar privileges.

EXEMTS *du ban et arriere ban*, persons exempted from being enrolled for that particular service, were so called. They consisted of the domestic attendants belonging to the palace, those attached to the princes and princesses of the blood; all persons actually serving his majesty, together with the sons of officers who were in the army.

EXEMTS *des gardes du corps*. Exempts belonging to the body guards. They were twelve in number, and held the rank of captains of cavalry, taking precedence of all captains whose commissions were of a younger date to the brevet of the exempts.

These brevet commissions were given away under the old government of France.

EXEMTS *des maréchaussées*. Certain persons employed to keep the public peace. *Maréchaussée* means in a literal sense, marshalsey. But the functions of the exempts were of a nature peculiar to France. They held their situations under commissions, bearing the great seal, which were forwarded to them by the secretary at war. The privileges they enjoyed were to be exempted from all taxes, &c. but they could not institute any species of criminal information without the concurrence of the greffier or sheriff.

EXERCISE, in military affairs, is the practice of all those motions and actions, together with the whole management of arms, which a soldier is to be perfect in, to render him fit for service, and make him understand how to attack and defend. Exercise is the first part of the military art; and the more it is considered the more essential it will appear. It disengages the human frame from the stiff rusticity of simple nature, and forms men and horses to all the evolutions of war. The honor, merit, appearance, strength, and success of a corps depend wholly upon the attention which has been paid to the drill and exercise of it, according to prescribed rules and regulations; while on the other hand we see the greatest armies, for want of being exercised, instantly disordered, and that disorder increasing in spite of command; the confusion oversets the art of skilful masters, and the valor of the men only serves to precipitate the defeat: for which reason it is the duty of every officer to take care, that the recruits be drilled as soon as they join the corps.

The greatest advantage derived fro the exercise, is the expertness with wh men become capable of loading and firing, and their learning an attention to act in conformity with those around them. It has always been lamented, that men have been brought on service, without being informed of the uses of the different manœuvres they have been practising; and that having no ideas of any thing but the uniformity of the parade, they instantly fall into disorder and confusion when they lose the step, or see a deviation from the straight lines they have been accustomed to at exercise. It is a pity to see so much attention confined to show, and so little given to instruct the troops in what may be of use to them on service. Though the parade is the place to form the characters of soldiers, and to teach them uniformity, yet when confined to that alone, it is too limited and mechanical for true military use.

The great loss which the British troops sustained in Germany, America, and the West Indies, during the war of 1783, from sickness, as well as from the enemy, was chiefly owing to a neglect of exercise. An army whose numbers vanish after the first 4 months of a campaign, may be very ready to give battle in their existing period; but the fact is, that although fighting is one part of a soldier's business, yet bearing fatigue, and being in health, is another, and at least as essential as the first. A campaign may pass without a battle; but no part of a campaign can be gone through without fatigue, without marches, without an exposure to bad weather; all of which have exercise for their foundation; and if soldiers are not trained and enured to these casualties, but sink under them, they become inadequate to bodily fatigue, and eventually turn out a burthen to the country.

It is not from numbers, nor from inconsiderate valor, that we are to expect victory; in battle she commonly follows capacity, and a knowlege of arms. We do not see, that the Romans made use of any other means to conquer the world, than a continual practice of military exercises, an exact discipline in their camps, and a constant attention to cultivate the art of war. Hence, both ancients and moderns agree, that there is no other way to form good soldiers but by exercise and discipline; and it is by a continual practice and attention to this, that the Prussians arrived at that point of perfection which was long so much admired in their evolutions, and manual exercise.

Formerly in the British service every commander in chief, or officer commanding a corps, adopted or invented such manœuvres as he judged proper, excepting in the instance of a few regulations for review: neither the manual exercise, nor quick and slow marching were precisely defined by authority. In consequence when regiments from different parts were brigaded, they were unable to act in line till the general officer commanding had established some temporary system to be observed by all under his command.

These inconveniences were at length obviated by the rules and regulations compiled by general Dundas on the system of the Prussian discipline, as established by Frederic the Great.

During the American revolution, a committee of officers was appointed by congress to digest a system of discipline for the military forces of the United States. A considerable body of materials were thrown together by the several officers, which proving too voluminous, amounting to three volumes folio, Baron Steuben, an officer who had been in the Prussian service, was appointed to make a digest, which was afterwards adopted, and continues still to be the only regulation for discipline. This work which is very brief, was of much use where there was no sort of order established, or rather where utter disorder prevailed; but is not by any means adapted to the uses of a good discipline in the present state of military knowlege. It is confined to the duties of a regiment of infantry only, and is in fact no more than an abstract modification of the Prussian system of 1741. The war department of the United States, has had the provision of a more enlarged and competent system under preparation for three or four years, and the commander in chief (general Wilkinson) had made great progress in a general arrangement of a system comprehending all the details of drill, exercise, manœuvre, formations of separate, and co-operating bodies, and of various kinds of troops; as well as the police of camps, garrisons, rank, and rotation; and other regulations, but public service having called him off to the southern frontier, and general Dearborne having resigned, the system of Steuben remains, while the new discipline of Europe has become known to all the volunteer corps of the Union, commanded by intelligent officers; and the old discipline of Steuben, has from actual deficiency been superceded.

Infantry Exercise, includes the use of the firelock and practice of the manœuvres for regiments of foot, according to the regulations issued by authority.

When a regiment of foot is drawn up, or paraded for exercise, the men are placed two and sometimes three deep, which latter is the natural formation of a battalion. In order to have the manual exercise well performed, it is in a particular manner requisite, that the ranks and files be even, well dressed, and the file leaders well covered: this must be very strictly attended to both by the major, and his adjutant: all officers also, on service in general, where men are drawn up under arms, or without, must be careful, that the ranks and files are exactly even; and the soldiers must learn to dress themselves at once, without the necessity of being directed to do it. The beauty of all exercise and marching, consists in seeing a soldier carry his arms well, keep his firelock steady and even in the hollow of his shoulder, the right hand hanging down, and the whole body without constraint. The musquets when shouldered, should be exactly dressed in rank and file; the men must keep their bodies upright, and in full front, not having one shoulder too forward, or the other too backward. The distances between the files must be equal, and not greater than from arm to arm, which gives the requisite room for the motions. The ranks are to be two paces distant from each other. Every motion must be done with life, and all facings, wheelings, and marchings, performed with the greatest exactness. Hence a regiment should never be under arms longer than three hours without rest. See Firings, Manual and Manoeuvres.

Cavalry Exercise, is of two sorts, on horseback, and on foot, The squadrons for exercise are sometimes drawn up three deep, though frequently two deep; the tallest men and horses in the centre and front. When a regiment is formed in squadrons, the distance of 24 feet, as a common interval, is always to be left between the ranks; and the files must keep boot top to boot top. The officers commanding squadrons must, above all things, be careful to form with great celerity, and, during the whole time of exercise, to preserve their several distances. In all wheelings, the flank which wheels, must come about in full gallop. The men must keep a steady seat upon their horses, and have their stirrups at a fit length.

Cavalry Sword Exercise. See Sword Exercise

Artillery Exercise, is the method of teaching the corps of artillery the use and practice of all the various machines of war, viz.

Exercise *of the light field pieces*, teaches the men to load, ram, and spunge the guns well; to elevate them according to the distance, by the quadrant and screw; to judge of distances and elevations without the quadrant; how to use the port fire, match, and tubes for quick firing; how to fix the *bricole* and *prolonge*, and use them in advancing, retreating, and wheeling with the field pieces; how to fix and unfix the trail of the carriage on the limbers, and how to fix and unfix the boxes for grape shot on the carriages of each piece.

Exercise *of the garrison and battering artillery*, is to teach the men how to load, ram, and spunge; how to handle the handspikes in elevating and depressing the metal to given distances, and for ricochet; how to adjust the coins, and work the gun to its proper place; and how to point and fire with exactness, &c.

Mortar Exercise, is of two different sorts, viz. with powder and shells unloaded, and with powder and shells loaded; each of which is to teach the men their duty, and to make them handy in using the implements for loading, pointing, traversing, and firing, &c. See Practice.

Howitz Exercise, differs but little from the mortar, except that it is liable to various elevations; whereas that of the mortar is usually fixed to an angle of 45°; but the men should be taught the method of ricochet firing, and how to practise with grape shot: each method requiring a particular degree of elevation. See Practice.

Exercise *of guns with reduced numbers.* When 15 men are attached to the service of a gun in the field, they may be classed to the right and left sides of the gun; or they may be placed in a kind of roster, by a succession of numbers from 1 to 15; the two first numbers of each gun being the first and second gunner; and the remaining 13 as aids. This numerical distribution, upon a little practice, will be found as easy as the regulation of the guard duties, and is well calculated for service where discipline is good. It is by this arrangement also well suited to use, where there are men not well disciplined, as these can be placed on the remotest numbers. So it is also well calculated for horse artillery, where it will require some men to take care of the horses; and it is also well adapted to service where men are lost by the casualties of war.

Supposing, therefore, that a 12 pound gun with 15 men, is required to exercise with 9 men. The six numbers, beginning with the 4th aid of the left, or Nos. 10, 11, 12, 13, 14, 15, that is, the fourth of the left, fifth and sixth aids of the right and left, in the practice; they are either employed on other service, or engaged in securing the horses, or in preserving and securing the caisson. The first gunner has provided a return of the names and stations of each man at the gun. They are posted as follows: and the numbers which precede their stations are the numbers of their roster, and they should be prepared to answer by their number, whenever called for.

No. 1. First gunner on the right.
2. Second gunner on the left.
3. First aid on the right.
4. First aid on the left.
5. Second aid on the right.
6. Second aid on the left.
7. Third aid on the right.
8. Third aid on the left.
9. Fourth aid on the right.
10. Fourth aid on the left.
11. Fifth aid on the right.
12. Fifth aid on the left.
13. Sixth aid on the right.
14. Sixth aid on the left.
15. Thirteenth aid.

A reference to the number prefixed to these stations, simplifies the return, and points out the duty of each, which may be done by either telling them off in rank, ing, or giving them a ballot with their number on it, or any other arbitrary sign that may be devised. It is proposed then to post the artillerists to a gun on the march; and so of several guns. A twelve pounder is detached with 15 men, and they are numbered, it is required to know the stations of the artillerists according to their numbers, and according with the dipositions of the men to the same duties.

First rule, all the odd numbers are on the right side of the gun; all the even numbers on the left side. This is their position in *battery*, and prepared for action. The next rule is their positions in advancing.

Line of march. Nos. 2, 4, 6, and 8, are on the left, which numbers correspond with the second gunner, the first, second, and third aids of the left; so on the right of the gun, are the Nos. 1, 3, 5, 7, and 9, answering to the first gunner of the right, and the first, second, third, and fourth aids of the right, making in all nine, The other six aids, that is to say, the fourth aid of the left, the fifth aids of right and left, the sixth aids of right and left, and the thirteenth aid, are thus dispensed with, and may be thus dispensed with, unless the men are required with their bricoles to manœuvre the gun; if this is done with horse, their aid is only required with the horses, and it exemplifies the excellent adaptation of the means of this new discipline to its proposed end.

The third rule is, to find the men, and their stations by their numbers, it is only requisite to refer to the preceding table of numbers, 1 and 2 are stationed opposite the trail, they are the two gunners; 3 and 4 are opposite the muzzle in the march, they load and ram the cartridge and shot; 5 and 6 are opposite the breech; they have charge of the port fire and priming; 7 and 8 march opposite the axletree of the limber; they are the third aids of right and left, and have to supply ammunition, and move the tumbril on unlimbering; they are purveyors of the gun; 9 leads the limber horse, and takes charge of the tumbril when the gun is in battery.

Duties of nine men as numbered in battery.

Light Artillery duties.

1 Commands the gun.
2 Stops the vent, and elevates the gun.
3 Rams and spunges.
4 Loads with cartridge and shot.
5 Fires the gun.
6 Clears the vent and primes.
7 } Supply cartridge.
8 }
9 Takes charge of the tumbril or caisson.

Positions.

1 At the right handspike.
2 At the left handspike.
3 Outside of the right wheel, in front.
4 Outside of the left wheel, in front.
5 } Covering 3 and 4, and dressing with
6 } the rear of the wheels.
7 } Cover the aids in front, at a distance
8 } of 5 yards in their rear.
9 Is posted with the tumbril or caisson, 25 yards in the rear

Heavy guns.—The duties and positions are the same, only that 4 aids 3 in ramming home the charge.

Howitzers.—The positions and duties are nearly the same as at the heavy guns; only that 3 spunges, uncaps the fuze, and puts in the shell; 4 takes the sheep-skin out of the piece, lays it on the ground, with the woollen side up, loads with cartridge, wipes the bottom of the shell, (when 2 holds it up) puts in the sheep-skin again, and pulls it out with his left hand, on the word *Ready:* He stops the muzzle with it immediately, when the piece is fired: 6 serves the vent; 5 fires; 1 commands; 7 carries the slow match and bucket; 8 serves 4 with cartridges from a cartouch; 9 serves 3 with shells from the limber, which he lays on the sheep-skin. As from unavoidable accidents, the number of men attached to a gun may be reduced, it will be necessary, if the vacancies happen amongst those doing the most essential duties, to immediately replace them by those doing the most subordinate duties.

The following method of distributing the duties amongst a smaller number of men, will be equally applicable to all kinds of field ordnance.

No of men.	KIND.	Numbers retained.	The vacancies, how supplied.
9	Gun. How'r.	1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9	Complete.
8	Gun. How'r.	1 2 3 4 5 7 8 9 1 2 3 4 5 7 8 9	No. 6 being dropt, No 8 does his duties.
7	Gun. How'r.	1 2 3 4 5 7 9 1 2 3 4 5 7 9	No. 8's pouch is laid on the ground; 2 carries it when moving. No. 3 serves himself with ammunition.
6	Gun. How'r.	1 2 3 5 7 9 1 2 3 5 7 9	2 serves the vent with his left hand, pricks, primes, and carries tube box on the left side.
5	Gun. How'r.	1 2 6 7 9 1 2 6 7 9	No. 1 does all the duties of 5 like 2 in the last change, his own duties, and those of 2 at trail.
4	Gun. How'r.	1 2 6 9 1 2 6 9	No. 9 brings the ammunition; 6 serves the shells.
3	Gun. How'r.	1 6 9 1 6 9	No. 6 serves and loads all the ammunition... No. 6 and 9 must change duties occasionally.

To limber up, light Guns and Howitzers.

The whole of the men face towards the gun; 1 unships the travering handspikes; the limber is brought up by 9, rather to the sight of the gun, and then turned to the left about; 7 and 8 raise the trail, and place it on the limber, in which they are assisted by 3 and 4 bearing down on the muzzle, and 5 and 6 at the wheels; 2 chains the limber

Heavy Field Guns, or Howitzers.—The only difference from the above is, that 3 and 4 assist 7 and 8 to raise the trail, and 9 aids 5 and 6 at the wheels; 1 stands to the carriage wheels.

To unlimber, Light Guns and Howitzers.

The whole face towards the gun; 1 unchains the limber; 2 and 7 lift the trail off the pintle, and set it on the ground, in which they are assisted, as in limbering up, by 3, 4, 5, and 6; 2 ships the traversing handspikes, and the whole assume the position for action. The limber is led by 9 and the driver, 25 yards to the rear, and there turned to the left about. The leading horse is unhooked by the driver, and tied to the rear of the limber.

Heavy Field Guns, and Howitzers.—The same as the light ones, except that 5 and 6 assist 2 and 7 to raise the trail, and 8 and 9 stand to the gun wheels.

It must be understood, that simply to *limber up*, or to *unlimber*, means that the gun is to be placed upon its limber, or lifted off, without changing its direction: but guns may be limbered up to the *front*, to the *right*, or to the *left*, according as it is intended to advance in any of those directions; and unlimbered to the *rear*, to prepare for action to the *front*, to the *left* for action to the *right*, and to the *right* for action to the *left*. To limber up, or to unlimber, in any of these situations, is exactly the same as those already given, except that in the first, previous to limbering up, the trail is thrown round by No. 1, assisted by 2, if necessary, into the direction specified by the word of command, and the limber is brought up to that side to meet it; and in the second, the trail, after being taken off the limber, is carried round to the *rear*, *right*, or *left*, according as the word of command expresses, before it is put to the ground, and the limber goes round to the rear of the gun.

It must be constantly kept in mind, that the *front* of a gun, or line of guns, or column of guns, is that to which the men at the gun front, without any respect to the situation of the gun or carriage. The trail of the carriage, when moved round to the rear, or the contrary, whether in limbering up, or unlimbering, must always be carried round to the *right*, and the limber, or a horse, when brought up to advance or retire a gun, must always be brought up on the *right* side, and go off on the *left*; and whenever the limber is turned about, it must be to the *left* about By attending to these precautions, the greatest confusion is avoided.

Prepare to advance with a horse and prolonge.

Light pieces.—3 gives his spunge to 5; 3 and 4 unhook the chain traces from the breast of the carriage, and lay them over the spokes of the wheels; the driver brings up a horse to the front, by the right; 3 and 4 unhook the horses traces from the back band, and hook them to the gun, and then take post outside the wheels; 3 takes his spunge; 7 and 8 hook the traces to the swingle-trees.

Heavy pieces.—This is done with two horses, one before the other; 3 and 4 hook the horses, the driver rides to the rear horse, and 6 and 8 hook the rear horse to the gun; 1 and 9 look to the unfixing length and fastening of the prolonge.

Prepare for action.—The different numbers exactly undo what they had just done; 1 and 9 beginning to loose the prolonge as soon as the gun is fronted or about to be limbered.

Prepare to advance with a limber.

The only difference between this and advancing with a horse, is, that the limber is brought up to the front; and 9 or 15 brings up the prolonge, and takes a turn on the lashing rings of the trail; or if the gun is to be limbered, it is laid on as in the drill.

Exercise with heavy ordnance in a Battery.

32, or 42 *Pounder*

10 *Men.*

3 spunges; 4 loads.
7 and 8 run the gun up.
5 and 2 run up and elevate.
6 serves the vent, traverses, primes, and runs up.
5 fires.
8 brings cartridges.
1 points and commands.

9 *Men.*

3 spunges; 4 loads.
7 and 8 run up.
2 brings cartridges.
6 serves the vent, runs up, and primes.
3 runs up, traverses, and fires.
1 points and fires.
2 traverses and elevates.

8 *Men.*

3 spunges: 4 loads and runs up.
8 runs up.
5 and 6 run up and elevate.
7 brings cartridges, runs up, and traverses.
2 serves the vent, runs up, traverses, and primes.
1 points, fires, and commands

7 *Men.*

3 spunges and runs up.
4 loads and runs up.
7 runs up and elevates.
6 brings cartridges, runs up, and elevates.
2 serves the vent, runs up, traverses, and primes.
5 runs up, traverses, and fires.
1 points and commands.

6 *Men.*

3 Spunges and runs up.
4 loads, runs up, and elevates.

6 runs up and elevates.
5 brings cartridges, runs up, and traverses.
2 serves the vent, runs up, traverses, and primes.
1 runs up, points, fires, and commands.

5 *Men.*

3 and 4 load and run up.
2 and 3 prime, fire, and run up.
1 elevates, points, and commands.

24 *Pounder, &c.*

8 *Men.*

3 spunges; 4 loads.
6 and 7 run up and elevate.
2 serves the vent, runs up, traverses, and primes.
5 runs up, traverses, and fires.
8 brings cartridges.
1 points and commands.

7 *Men.*

3 spunges; 4 loads.
7 runs up and elevates.
6 brings cartridges, runs up, and elevates.
2 serves vent, traverses, and primes.
5 runs up, traverses, and fires.
1 points and commands.

6 *Men.*

3 spunges, runs up, elevates.
4 loads, runs up, and elevates.
2 serves the vent, runs up, traverses, and primes.
5 runs up, traverses, fires.
6 brings cartridges.
7 points and commands.

5 *Men.*

3 spunges, runs up.
4 brings cartridges, loads, runs up.
2 serves vent, runs up, elevates, and primes.
5 runs up, traverses, fires.
1 points and commands.

4 *Men.*

3 spunges, runs up, points.
4 brings cartridges, loads, runs up, and elevates.
2 serves vent, runs up, traverses, elevates, and primes.
1 runs up, traverses, fires.

3 *Men.*

1 spunges, runs up, points, and fires.
2 brings cartridges, loads, runs up, elevates, traverses.
3 serves vent, runs up, elevates, traverses, and primes.

4 2-5, or 5 1-2 *Inch Mortar.*

2 *Men.*

1 spunges, runs up, brings shells, puts them in, traverses, and primes.
2 serves the vent, runs up, brings cartridges, puts them in, points, and fires.

3 *Men.*

2 spunges, runs up, traverses, brings shells, and puts them in.
3 brings cartridges, puts in, serves the vent, runs up, primes, and fires.
1 points, elevates, and commands.

8 *Inch Mortar, or Howitzer.*

5 *Men.*

3 spunges, runs up, dredges.
5 runs up, brings cartridges, and puts them in.
4 runs up, brings cartridges, and puts them in.
4 runs up, brings shells, puts them in, elevates, primes.
2 runs up, traverses, fires.
1 serves vent, points, and commands.

4 *Men.*

3 spunges, runs up, dredges.
4 runs up, brings cartridges, and puts them in.
2 serves the vent, brings shells, and puts them in, runs up, traverses, and fires.
1 runs up, points, elevates, and commands.

10, or 13 *Inch Mortar.*

10 *Men.*

3 spunges, runs up, puts in shells, and dredges.
4 runs up, brings cartridges, puts them in, and puts in the shells.
6 brings cartridges.
7 and 8 bring shells.
9 and 10 run up and traverse.
2 serves vent and primes.
5 fires; 1 points, elevates and commands.

6 *Men.*

3 spunges, runs up, puts in shells, dredges, and traverses.
4 runs up, brings cartridges, and puts them in, puts in shells, and traverses.
5 and 6 run up, bring shells, and traverse.
2 runs up, serves vent, and primes.
1 runs up, points, elevates, fires, and commands.

Of the exercise of auxiliary machines.

Exercise of the Gin.

The complement of men for a gin is usually 1 con-commissioned officer and 10 men; they are numbered from 1 to 10, the non-commissioned officer being 11.

To carry a Gin.

1 and 2 carry a pry-pole, 3 and 5 the right cheek, 4 and 6 the left, 7 the windlass and side, 8 and 9 the blocks and tackles, 10 the handspikes, &c.

To set up a Gin.

1 and 2 put a common handspike through the ring, near the foot of the pry-pole, at which they lift; 3 and 4 steady the cheeks, by placing each a handspike against the lower cross bar; 5, 7, and 9, lift the right cheek; 6, 8, and 10, the left cheek; 11 gives directions. The tackles must be hooked on before the gin is raised.

To work a Gin.

1 and 3 man the right handspikes of the gin: 2 and 4 the left; 5, 6, 7, and 8, hold on the fall, and pull in the slack; 9 and 10 steady the gun, 9 at the muzzle, 10

at the breech. The tackle hook must be fixed directly over the dolphins, if any, or a little behind the trunnions.

In heaving, when the ends of 1 and 4's handspikes come as low as their knees, 2 and 3 put theirs into the upper holes of the windlass, and 3 gives the word *Bear*, upon which 1 and 4 clear their handspikes from the windlass, and 1 gives the word *Heave;* 2 and 3 then bear down their handspikes, and remain fast till 1 and 4 having taken their fresh purchase, 1 gives the word *Bear*, when 2 and 3 clear their handspikes, and 3 gives the word *Heave;* and so on alternately, till the gun is at its proper height, when the handspikes in the upper holes are made to rest against the upper cross bar, and 5 makes fast the fall to the lower cross bar; and if required to lower the gun, eases the fall off from the windlass; 5, 6, 7, and 8, move the carriage, as required, under the gun.

Exercise of the Sling Cart.

The men for the service of the sling cart are numbered from 1 to 7; the non-commissioned officer being No. (1); Nos. 2 and 3 sling the gun. The gun must be laid with one trunnion touching the ground, and the sling passes diagonally round the gun, being before one trunnion, and behind the other; and that end of the sling which goes round the lower side of the gun, must be the end to be acted on by the windlass; as by that means the trunnions become horizontal when the gun is raised; Nos. 4, and 6, man the right lever; 5, and 7, the left lever; and upon the word from the non commissioned officer, then directs, *left hand lever hold on, right lever bear;* the right lever takes a fresh purchase: then, *right lever hold on, left lever bear;* the left lever takes a fresh purchase; they then heave together again. When the gun is high enough, (1) puts in the pall; 2 and 3 take out the levers, and put in the pry-pole; 4 and 5 raise the breech of the gun with two common handspikes, and 6 and 7 lash it to the pry-pole: 2 and 3 then lay their levers along side the pry-pole, and 4 and 5 their handspikes on the top of them, which 6 and 7 lash all fast together.

Exercises, are also understood of what young gentlemen or cadets learn in the military academies and riding schools; such as fencing, dancing, riding, the manual exercise, &c.

EXHORT. See Animate.

EXPEDITION, in a general sense, signifies haste, speed, rapidity. In a military sense, it is chiefly used to denote a voyage or march against an enemy, the success of which depends on rapid and unexpected movements. It is out of the nature of the thing itself to lay down fixed rules for the minute conducting of small expeditions; their first principles only can be with certainty fixed, and men will often disagree about preparations, and differ in their conduct, though they acknowlege the same principles.

One of the principles of many small expeditions, is surprise; and 6 battalions, without much accompaniment, may sometimes do that which 24, and a great fleet, would not succeed in.

There is no part of war so interesting to an insulary soldier as an expedition; nor can there be any part more worthy of attention.

Expeditions have heretofore had no rules laid down for their conduct, and that part of war had never been reduced to a system. The slow rules of a great war will not do in expeditions; the blow must be struck with surprise, and intimidation be produced in the invaded enemy, before succors can arrive. Debate is out of season, and all slow proceedings are ruin. Not to advance, is to recede; and not to be on the road to conquest, is to be already conquered. There must be that glance, which sees certainly, though instantly; that rapidity, which executes on the surest rules, when it seems least to act on any. The French have given all their campaigns the characters of expeditions.

In all small expeditions, such as expeditions of surprise, or *coup-de-main*, the favorable side of the proposed action must ever be viewed; for if what *may* happen, what *may* arrive, what *may* fall out, is chiefly thought upon, it will, at the very best, greatly discourage, but in general end in a total failure. Hence the very name of an expedition implies risk, hazard, precarious warfare, and a critical operation.

An expedition is governed by five principal maxims.

1st, A secrecy, if possible, of preparation, and a concealment of design, &c.

2dly, That the means bear proportion to the end. In this there will ever be a difference in opinion

3dly, A knowlege of the state and situation of the country, where the scene of action is, or the place or object that is to be attacked.

4thly, A commander who has the particular turn of mind, which is most adapted to such particular sort of warfare.

Lastly, The plan of an expedition, great or small, is ever to be arranged as much as possible before setting out, and then any appearances that may vary a little from what might have been expected, will not perplex.

Expedition, *Fr.* See expedition. The French likewise use this word, to express any particular military quality, which an officer or soldier may possess. As, *cet officier est un homme d' expedition*, this officer is a man of enterprise, is courageous and daring.

EXPLOIT. See Atchievement.

To **EXPLODE**, burst or blow up.

EXPLOSION, the discharge of a gun,

the blowing up of a mine, or the bursting of a shell.

EXPRESS. A messenger sent with direct and specific instructions.

To send by Express, to send any thing by extraordinary conveyance.

EXPUGN,
EXPUGNATION, } the taking any place by assault.

EXPERIMENTS, in a military sense, are the trials, or applications of any kind of military machines, in order to ascertain their practical qualities and uses.

EXTEND, when the files of a line, or the divisions of a column are to occupy a greater space of ground, they are said to extend their front or line. Extended order is applicable to the light infantry.

EXTORTION, the act of obtaining money or property by violence or unjust means: taking advantage of the ignorance or peculiar circumstances of a purchaser, to demand more than a fair price for an article. All sutlers, or camp followers, who are guilty of extortion in the sale of necessaries, are punishable by a general or regimental court-martial.

EXTRADOS, *Fr.* The exterior surface of a regular arch, used in the construction of powder magazines.

EXTRAORDINARIES *of the army.* The allowances to troops, beyond the gross pay in the pay office, come under the head of extraordinaries to the army. Such are the expences for barracks, marches, encampments, staff, &c.

EXTRAORDINARII, among the Romans, were a body of men consisting of a third part of the foreign horse, and a fifth of the foot, which body was separated from the rest of the forces borrowed from the confederate states, with great caution and policy, to prevent any design, that they might possibly entertain against the natural forces. A more choice body of men was drawn from amongst the extraordinarii, under the name of ablecti. See Ablecti.

EXTRAORDINARY. Something out of the common course.

Extraordinary *couriers*, persons sent with some information or order of great importance.

Extraordinary *guards.* Guards out of the common routine of duty. They are frequently given as a punishment for military offences.

EYES *Centre*, an old word of command given when the battalion was advancing in line, denoting, that the men were to look to the centre in which the colors are placed, and dress by them.

Eyes *right*,
Eyes *left*, } words of command denoting the flank to which the soldier is to dress. In casting his eyes to either flank care must be taken that the shoulders are kept square to the front.

Eyes *front*, a word of command given after the dressing in line is completed, on which the soldier is to look directly forward, which is the habitual position of the soldier. These motions are only useful on the wheeling of divisions, or when dressing is ordered after a halt, and particular attention must be paid in the several turnings of the eyes, to prevent the soldier from moving his body, which must invariably be preserved perfectly square to the front. In the American practice the direction of the eye is understood to follow the word *dress—as right, centre*, or *left dress.*

Eye-*bolts.* See Bolts.

F.

FACADE, in military fortification. See Face.

FACE, in fortification, is an appellation given to several parts of a fortress; as the

Face *of a bastion*, the two sides, reaching from the flanks to the saliant angle. These in a siege are commonly the first undermined, because they extend most outwards, and are the least flanked; consequently the weakest.

Face *prolonged*,
Face *extended*, } that part of the line of defence razant, which is terminated by the curtain and the angle of the shoulder, that is, it is, strictly taken, the line of defence razant, diminished by the face of the bastion.

Face *of a place*, is the front comprehended between the flanked angles of two neighboring bastions, composed of a curtain, two flanks, and two faces; and is sometimes called the *Tenaille of the place.*

Face *of a gun*, is the superficies of the metal at the extremities of the muzzle of the piece.

Face, (*to the right, left, &c.*) a word of command on which the soldiers individually turn to the side directed; in performing which, the left heel should never quit the ground, the knees must be kept straight, and the body turned smoothly and gracefully. The moving of the right foot forward or backward, is wholly exploded; all the facings are now made upon the left heel as a pivot. The following are the old methods.

To the right, Face. 2 motions.—1st, Place the hollow of the right foot smartly against the left heel; 2d, Raise the toes, and turn (a quarter of the circle) to the right on both heels.

To the right about, Face, 3 motions.——1st, Place the ball of the right toe against the left heel; 2d, Raise the toes, and turn (half of a circle) to the right about on both heels; 3d, Bring the right foot smartly back in a line with the left.

To the left, Face. 2 motions.—1st, Place the right heel against the hollow of the left foot; 2d, Turn (a quarter of the circle) to the left on both heels.

To the left about, Face. 3 motions.—1st, Place the right heel against the ball of the left foot; 2d, Raise the toes, and turn (half of a circle) to the left about on both heels; 3d, Bring up the right foot smartly in a line with the left.

Quarter Face to the right or left, is now substituted for the old and awkward mode of oblique marching, the quarter facing being referred to the positions of action being all on the face of a semicircle; half of which is facing to the *right* or *left*; that is the side of the soldier is thrown to the previous front; in quarter facing the side is thrown diagonally between the front and flanks; marching quarter face is called marching by the *line of science*.

Great precision must be observed in these facings; otherwise the dressing will be lost in every movement.

Faces *of a square*. The different sides of a battalion, &c. when formed into a square are all denominated faces, viz. the *front face*, the *right face*, the *left face*, and the *rear face*. See Square.

Face *ou pan de bastion*, Fr. See Face *of a bastion*.

Face *d'une place*, Fr. See Tenaille.

FACINGS, are the different movements of a battalion, or of any other body of men, to the right, to the left, or right and left about. All facings must be executed with a straight knee; and the body must be kept firm, and turn steadily, without drooping forward or jerking. The plant of the foot, after facing about, must be sharp.

Facings, likewise signify the lappels, cuffs, and collar of a military uniform, and are generally different from the color of the coat or jacket.

FACTION, *Fr.* the duty done by a private soldier when he patroles, goes the rounds, &c. but most especially when he stands centry. The French usually say, *entrer en faction*, to come upon duty; *être en faction*, to be upon duty; *sortir de faction*, to come off duty.

FACTIONNAIRE, *Fr. Soldat factionnaire*, a soldier that does every species of detail duty.

The term *factionnaire*, was likewise applicable to the duty done by officers in the old French service. *Premier factionnaire du regiment* implied, that the officer, so called, was the fourth captain of a battalion; as the colonel, lieutenant colonel, major, and the captain of grenadiers did not mount the ordinary guards.

FAGOTS, in the military history were men hired to muster by officers whose companies are not complete; by which means they cheated the public of the men's pay, and deprive the country of its regular establishment. See *False return*.

A British general in the East Indies made an immense fortune by *bullock* fagots. Artillery are all drawn by oxen in Asia, as well as all baggage; upon an *inspection* of bullocks, the inspector counted 12,000: it appeared there were only 4,000, they were drawn up in front of a wood, and as soon as the bullocks on the right were inspected; they were drawn off successively by the rear, and appeared again in ranks on the left; so that every bullock was three times inspected, and the round number returned.

Fagots. See Fascines.

FAILER. See Deserter.

FAILURE, an unsuccessful attempt, as the failure of an expedition.

FAIRE *faux feu*, *Fr.* to miss fire; to flash in the pan.

FALAISE, *Fr.* Any part of the seacoast is so called by the French, when it is extremely steep, and broken into precipices.

FALAISER, *Fr.* to break upon. *La mer falaise* signifies, the sea breaks upon the shore.

FALCHION, a short crooked sword.

FALCON, or *Faucon*, an ancient name given to a 3-pounder. See Cannon.

FALCONET, an ancient name given to a 1½-pounder. See Cannon.

FALL. The fall of a place after it has been besieged. See Surrender.

To Fall *back*, to recede from any situation in which you are placed. This phrase is frequently, indeed, always made use of in the drill, or exercise of soldiers; particularly during the formation of a line, when individuals, or whole divisions are apt to overstep their ground and get beyond the dressing point.

FALL *in*, a word of command for men to form in ranks, as in parade, line, or division &c.

To fall in likewise means the minute arrangement of a battalion, company, guard or squad, by which every man is ordered to take his proper post. The long roll, a peculiar beat of the drum, is the usual signal for soldiers to assemble and fall in.

To Fall *into*, to become the property of another, as, we fell in with a large convoy of the enemy, which after a short resistance made by the escort, *fell into our hands*.

To Fall *in with*. A military technical phrase, signified any sudden or unlooked for rencontre of any enemy. As our light cavalry patroles fell in with a party of foragers belonging to the enemy's army.

To Fall *off*, to desert; to fail; to relax in exertion.

To Fall *out*, to quit the rank or file in which you were first posted. Dirty soldiers on a parade are frequently ordered to fall out, and remain in the rear of their companies. The phrase is applicable in a variety of other instances.

To Fall *upon*. To attack abruptly, as, *we* no sooner came in sight of the enemy, but our advanced guard instantly fell upon his out-posts and beat them in. According to the celebrated General Monk it is very fit, that a general should often command his horse and dragoons to fall upon his enemy's outermost horse quarters; which mode, he says is one of the easiest, readiest, and securest ways to break an enemy's army.

FALOTS, *Fr.* small lanthorns fixed upon the end of a stick or pole. Small lamps are likewise used, attached in the same manner, for the purpose of carrying them readily about to light a camp, or besieged towns, as occasion may require.

FALSE *alarms*, an alarm or apprehension which is either designedly or unintentionally created by noise, report, or signals without being dangerous.

False *attack*, an approach which is made as a feint for the purpose of diverting your enemy from the real object of attack.

False *fires*, any fire or light which is made use of for the purpose of deceiving an enemy. False fires or lights are frequently resorted to when an army finds it necessary to retreat from an advanced position. On this occasion large fires are lighted in different parts of the camp and round the lines, previous to the departure of the troops, which generally happens in the night.

False *lights*, in debarkations under cover of the night, may likewise be used as signals of deception, when it is found expedient to attract the attention of the invaded country towards one part of the coast or territory, whilst a real attack is meditated against another.

False *muster*, an incorrect statement of the effective number of men or horses, by which government is defrauded. By the articles of war every officer, paymaster, or commissary, found guilty of false mustering, is ordered to be cashiered.

False *report.* A false report in military matters, may be truly said to be the ground work of a false return and a false muster, and consequently the primary cause of imposition upon the public. The strictest attention should, therefore, be paid to the most trifling report which is made in a troop or company respecting the presence or absence of men or horses, the state of clothing, accoutrements, or necessaries. This can only be done by the commanding officer of such troop or company having constantly the general good of the service at heart in preference to his own convenience, or to that of others. Every serjeant or corporal of a squad should be severely punished when detected in making a false report.

False *return*, a wilful report of the actual state of a brigade, regiment, troop, or company, by which the commander in chief or the war-office is deceived, as to the effective force of such regiment, troop or company.

FANION, *Fr.* corrupted from the Italian word *gonfanone*, a particular standard which was carried in the front of the ordinary baggage belonging to a brigade in the old French service. It was made of serge, and resembled in color the uniform or livery of the brigadier, or of the commandant of any particular corps.

FANTASSIN, *Fr.* A foot soldier. The term is derived from the Italian *fante*, a *boy*, the light troops in the 14th and 15th centuries being formed of boys who followed the armies, that were formed into corps with light arms, hence the origin of the word *infantry;* the French still use the words *mes enfans.*

FARAILLON, *Fr.* a light house.

FARIAL, *Fr.* a light house; also a watch light.

FARRIER, in a general acceptation of the term, any person who shoes horses, or professes to cure their diseases. In a practical military sense a man appointed to do the duty of farriery in a troop of cavalry. Troop farriers should be under the immediate superintendance and controul of a veterinary surgeon, to whom they ought to apply whenever a horse is ill or lame, that he may report the same to the officer commanding the troop. No farrier should presume to do any thing without having first received directions from his superior.

When the farrier goes round, after riding out, or exercise on horseback, he must carry his hammer, pincers, and some nails to faten any shoe that may be loose.

When horses at out quarters fall particularly ill, or contract an obstinate lameness, the case must be reported to the head quarters of the regiment; and if the veterinary surgeon cannot prescribe for him at a distance, he must, if time and distance will permit, be personally sent to examine the horse.

No farrier should make up any medicine or any external application contrary to the receipt given him by the veterinary surgeon.

If any farrier, through carelessness or inattention, lames a horse belonging to another troop, he ought to be at all the expence in curing the horse so lamed. In some well regulated cavalry corps this forms one of the standing regimental orders.

Farriers are in every respect liable to be tried according to the articles of war. They may be ordered to inflict punishments; and they must constantly recollect, that the circumstance of being a farrier is no extenuation for dirty appearance, or excuse for drunkenness. The guilt of the latter vice, indeed, is aggravated by the responsibility of their situation.

Farrier-*Major*, a person who was formerly appointed by the colonel of a dragoon regiment to superintend the farriers of troops, who are named by the several commanding officers of them. He has since been superceded or replaced by a veterinary surgeon, who, as the farrier-major was formerly directed, is to have free access to every stable of the regiment whenever he chuses. It is his duty to go frequently into the cantonments of the different troops, and examine the horses feet; and if he finds a shoe contrary to the regimental pattern, or discovers any thing amiss in the management of the troop horses, he is to report it immediately to the officer commanding the regiment. In all his duty he is to receive the utmost support from every officer and quarter master; and any farrier that dares to act contrary to his instructions, should be punished. There ought, in fact, to be a chain of mutual support and cooperation from the veterinary surgeon, up to the commanding officer of every cavalry regiment, each farrier looking to the veterinary surgeon for correct instructions relative to the preservation of every horse's health.

FASCINES, in fortification, are a kind of fagots, made of small branches of trees or brush wood, tied in 3, 4, 5, or 6 places, and are of various dimensions, according to the purposes intended. Those that are to be pitched over, for burning lodgments, galleries, or any other works of the enemy, should be 1½ or two feet long. Those that are for making epaulements or chandeliers, or to raise works, or fill up ditches, are 10 feet long, and 1 or 1½ feet in diameter. They are made as follows: six small pickets are struck into the ground, 2 and 2, forming little crosses, well fastened in the middle with willow bindings. On these tresles the branches are laid, and are bound round with withes at the distance of every 2 feet. Six men are employed in making a fascine; 2 cut the boughs, 2 gather them, and the remaining 2 bind them. These six men can make 20 fascines every hour. Each fascine requires five pickets to fasten it.

FASTNESSES, strong places not easily forced.

FATHOM, in fortification, originally denoted that space which a man could reach when both his arms were extended; but it now means a measure of 6 feet or 2 yards, equivalent to the French word toise. See Toise.

FAUCON. See Falcon.

Faucon ou Fauconneau, *Fr.* a small piece of ordnance, carrying from 1 to 1½ pound ball.

FAUCHION. See Falchion.

FAUCONET. See Falconet.

FAULX, *Fr.* an instrument nearly resembling a scythe. It is often used to defend a breach, or to prevent an enemy from scaling the walls of a fortified place. This weapon was first resorted to with some success, when Louis the XIV. besieged Mons. On the surrender of that town, the besiegers found large quantities of faulx, or scythes in the garrison.

FAUSSE-BRAIE. See Fausse Braye.

FAUSSE-BRAYE, in fortification, is a low rampart encircling the body of the place; its height is about 3 feet above the level ground, and its parapet about three or four toises from that of the body of the place. These works have been entirely rejected by the modern engineers, excepting M. Vauban, who makes them only before the curtains; and then they are called more properly tenailles.

Feathers, are ornamental marks worn by officers and soldiers in their caps or hats. The following distinctions are made, and directed by authority to be observed in the British service. In the royal artillery, both officers and men, have white feathers. The cavalry and battalion corps scarlet and white; the grenadiers all white, and the light-infantry all green.

FEDERATE. See Confederate.

FEES, are sums of money claimed by persons in office, and to the payment of which every British officer is subject. Fees are paid at the British war office for different commissions, and are charged to their respective owners by the army agents.

FEINT, a mock attack, or assault, often made to conceal the true one.

FELLOES, or Fellies, in artillery, are the parts of a wheel which form its circumference. The dimensions of fellies of British wheels are as follow: for a 24-pounder, 5 inches thick, and 6.5 inches broad; for a 12-pounder, 4.5 inches thick, and 6 inches broad; for a 6-pounder, 4 inches thick, and 5.5 inches broad, &c. made of dry elm. There are generally 6 in each wheel See Wheel.

FELLOW *soldier* one who fights under the same commander, a comrade. Dr. Johnson very properly calls this term an endearing appellation used by officers to their soldiers. The French use an equivalent expression, *camarade*, or comrade; the officers also calls the soldiers *mes enfans*, my *boys* or my *children*. The toils and perils, in fact of a military life, are so many, that an army fighting under the same banners may be truly called one family, and every officer should look upon himself as the father, the guardian, and the protector of his men.

FENCE, a guard, security, outwork, &c.

To Fence, to practice with foils; to fight with swords; to secure any place by pallisades, &c.

FENCIBLE, any thing capable of defence. Such regiments as are raised for limited service, and for a limited time, are called fencible regiments. They rank junior to the line.

FENCING, is the art or science of making a proper use of the sword, as well for attacking an enemy, as for defending one's self. Fencing is a genteel exercise, of which no military gentleman should be ignorant. It is learned by practising with steel foils. See Foils.

Fencing is either simple, or compound. Simple is that which is performed nimbly, and off hand, on the same line. In this the principal intention, in respect to the offensive part, should be to attack the enemy in the most unguarded quarter; and in the defensive, to parry or ward off the enemy's thrusts or blows.

Attitude, in Fencing, the head upright, though the body hath a forward inclination on a longe; and all the weight resting on the left haunch when on guard. The feet, hand, body, arm, and sword, must be to the line.

Appel, in Fencing, is a sudden beat of your blade, on the contrary side to that you join your adversary on, and a quick disengagement to that side again.

Beating, in Fencing, is when you parry with a sudden short beat, to get a quick repost; or when you beat with your foot, to try if you are firm on it, or on both feet.

Battering, in Fencing, is to strike the feeble of your adversary's blade on the side opposite to that you join, &c.

Back-quarte, is a parade of a late invention, and is a round quarte over the arm.

Cave, in Fencing, is a tierce on a quarte side, also the thrust of a prime, or a seconde, at the low quarte side.

Darting, in Fencing, to defend a blow with some contraction of your arm, and to dart a thrust right forward.

Feint forward, in Fencing, made by advancing your point a little from its line and coming to it again.

Guard, in Fencing, is any of the parades you stand on.

On guard, is being placed properly on your feet, and well covered with your weapon.

Lurching in Fencing, to make an opening, to invite your adversary to thrust at you, when you, being ready, may find a favorable repost at him.

Locking, in Fencing, is to seize your adversary's sword arm by twining your left arm round it, after you close your parade, shell to shell, in order to disarm him.

Guards in {*carte*, *tierce*,} implies the putting of the body and sword in such a state of defence, as to prevent the antagonist from wounding you, by either of the thrusts so denominated. These are the principal positions on which to engage. The others, *viz.* prime, seconde, quinte, half-circle, &c. are termed parades, when used with the small sword.

Hanging-guard, one of the broad-sword guards. See Broad-sword.

Thrusts are of various denominations, according to the direction of the point, and position of the wrist.

The thrusts directed at the inside of the body, are called prime, carte, and low-carte; those at the outside, are seconde, tierce, carte over the arm, quinte and flanconade.

In teaching, the thrusts are not arranged according to the above order; it is usual to begin with carte (or quarte) and tierce, the names of which prove them to have been originally the 4th and 3d positions in the art; but which are now justly considered as the chief and most elegant.

Parrying in Fencing, the action of warding off the blows aimed at each other.

Flanconade, in Fencing, is the action of dropping the point of your sword under your adversary's hilt, in seizing with force the feeble of his blade; which binding, without quitting it, form the parade in octave and then throw in your thrust. See *Art of defence with swords by the author of Am. Military Library.*

Glissade, in Fencing, is performed by dexterously making your sword slip along your adversary's blade, and forming at the same time your extension, &c.

FER, *Fr.* Iron. Figuratively, this word is used for a sword or dagger; as *manier le fer*, to wear the sword, to follow the profession of arms, *Battre le fer*, to fence.

Fer *à cheval*, Fr. In fortification, a horse-shoe, which see. It further means according to the French acceptation of the term, a work constructed for the purpose of covering a gate, by having within it a guard-house, to prevent the town from being surprised.

FERDWIT, in ancient military history, a term formerly used to denote a freedom from serving upon any military expedition; or according to some, the being quit of manslaughter committed in the army.

FERRIES, water conveyances, made use of to cross rivers, or branches of the sea.

FERTH or FORTH. See Army.

FEU, *Fr.* Fire. *Faire feu*, to discharge any sort of fire arms.

Feu, *fire*, is also understood to mean any light combustible, which is kept up in the front of a camp, and at each post during the night to keep the soldiers alert, and to prevent them from being surprised.

Every species of fire, or light is, however, strictly forbidden on a march, when the object is to surprize an enemy. Soldiers on these occasions are not permitted to smoke. Bundles, and large wisps of lighted straw, which are hung out from the tops of steeples, or from any other elevation, frequently serve to give the alarm when an enemy is discovered in the act of passing a river.

Lights are likewise resorted to on various other occasions. See Lights.

Feu *de joie* See Running-Fire.

Feu *rasant*, Fr. a grazing fire, or a discharge of ordnance or musquetry so directed that the shot shall run parallel with the ground they fly over, within 3 or 4 feet of the surface.

That is likewise called a *feu rasant*, or grazing fire, which is sent in parallel directions with the faces of the different works belonging to a fortification.

FICHANT. See Line of Defence, Fortification.

FIELD. The ground of battle. A battle, campaign, or the action of an army while it keeps the field.

Field-*bed*, a folding bed used by officers in their tents.

Field-	*Colors,*	See	*Camp colors.*
	Officers,		*Officers.*
	Pieces,		*Cannon.*
	Staff,		*Lintstock.*
	Works,		*Field fortification.*

Field-*Fort*. See Fort.

Field-*marshal*, a military rank superior to all others, except the captain general.

This rank formerly existed and has been again revived in England. The French in their modern system, have given it an effective character, it being the superior rank of distinguished generals; the number of which have a temporary limitation. Their corps d'armie or legion of 25,000 men, are each commanded by a marshal.

FIFE, a military instrument of the wind kind, generally used as an accompaniment to the drum.

FIFRE, *Fr.* Fife. In French, this word likewise means fifer.

FIGHT. See Battle.

FIGHTING-*men*, such as are effective, and able to bear arms.

Running-Fight, that in which the enemy is continually chased.

FIGURE, in fortification, the plan of any fortified place, or the interior polygon. Of this there are two sorts, regular, and irregular; a regular figure is that where the sides and angles are equal; an irregular one where they are unequal.

FILE, in the art of war, is an unlimited term, comprehending any number of men, drawn up in a direct line behind each other; as a rank on the other hand, includes any number drawn up beside each other; whether in either respect, they be in close or open order. Or rather, by *file* is meant the line of soldiers standing one behind another, which makes the depth of the battalion; and is thus distinguished from the rank, which is a line of soldiers drawn up side by side, forming the length of the battalion. A file is 2 or 3 deep; hence a battalion or regiment drawn up, consists of 2 or 3 ranks, and of as many files as there are men in a rank.

The files of a battalion of foot were formerly 12 and 6 deep, but now only 3, which is its natural formation. Those of the cavalry are but 2 deep.

A File on horseback, in marching order, occupies in the ranks 3 feet; thus 3 file 9 feet. A file on foot occupies in the ranks 22 inches.

Close Files in cavalry, are at the distance which was taken before dismounting, when each man's boot-top touches, but does not press that of his neighbor.

Loose Files, in cavalry movements, are 6 inches distant from boot top to boot top being calculated for the gallop as well as the walk of a squadron.

Open Files in cavalry are the full breadth of a horse from boot-top to boot-top. They contain the distance which is left, when from close files the left files rein back to dismount. Recruits and horses must be frequently exercised at this distance. See *American Military Library*.

Flank File, the extreme file on the right or left of a squadron or troop, battalion or company, &c.

Forming from File, is when the front file halts, and the rest ride up at a very smart gallop, taking care to halt in time, and not to over-run the front. If the formation is by doubling round the front file (for instance, when a formation is made to the rear of the march, or to the right, when marched from the right) the files must double round as close and as expeditious as possible,

In all formings from file, the leaders of ranks instantly cover each other, take the ordered front and halt. See *American Military Library*.

In the covering of files on horseback, the same directions hold good as on foot. In addition, it must be scrupulously observed that every man's horse stands exactly straight to the same front as that of the man before him. Both in the horse and foot drill, the men should be often practised in covering. The former are thereby taught to place their horses straight under them,

Close Files of infantry, are soldiers standing in rank, contiguous to one another, upon any given depth of line or column. Whenever a regiment marches in front, every man should feel the arm of his next man which ever way he dresses; but he must not lean on him, nor must he move his arm from the body to feel him. So that close files mean nothing more than that soldiers in the ranks should lightly touch each other, without crowding or pressing.

Open Files, are soldiers standing in rank at given distances without touching one another. The formation at open files is only practised as a preparatory drill for forming at close files, (which is the order for action) so that every man may be taught to stand and move in a proper position, without acquiring a habit of leaning upon his neighbor. On this account every intelligent officer who has the management of recruits, will form them sometimes at open files, and march them in that order. Soldiers that have been regularly drilled, should likewise be occasionally practised in advancing by open files.

Double FILES are formed by the left files in each rank stepping to the rear of the right files; or the contrary.

Indian FILES, a line of men advancing or retreating from either of the flanks, from the centre or from any proportion of a line in succession to one another They are sometimes called goose files; but the term is only familiarly, or rather vulgarly used among soldiers, and derives its appellation from a flock of geese, generally following a leader, one by one. The Prince de Ligne, says, that men march forward in file, or *en ordré mince, par une instinct moutonnier*, meaning, that they follow each other like so many sheep, who move by instinct.

FILE-*leader*, is the soldier placed in the front of any file, or the man who is to cover all those that stand directly in the rear of him, and by whom they are to be guided in all their movements.

File leaders must be particularly careful to preserve their proper distances from which ever hand they are to dress, and the followers of each file must only be attentive to cover, and be regulated by their proper file leaders. In file the rear rank invariably dresses by, and is regulated by the front rank.

To double the FILES, is to put 2 files into one, making the depth of the battalion double to what it was, in number of men. Thus four deep are double files.

FILE *marching on foot*, all recruits must be taught first to face, and then to cover each other exactly in file, so that the head of the man immediately in front may conceal the heads of all the others behind him. The principal points to be attended to are, that the men move in equal time an equal pace of 2 feet, that the front rank men cover exactly, and that the rear rank men keep closed and dressed to the front rank.

File marching may be practised to the front, to the rear, and to either flank; in all which cases the men must be taught to cover well. When recruits are at drill, on the word *march*, the whole are to step off with the left foot together, gaining at the very first step 24 inches, and so continuing each step, without increasing the distance betwixt each recruit, every man placing his advanced foot on the ground, before the spot from whence his preceding man had taken up his. See *Amer Mil. Lib.*

Marching in open order to the front, is when any body of men advances by ranks at open order, and dress to some given object without touching one another. The flank man of the flank the soldiers dress to, must be a non-commissioned officer, and he must take especial care not to incline to one hand or the other. His head must be kept quite straight to the front, his body must be erect, and he must advance without deviating in the most trifling manner to the right or left. In order to execute this essential part of the drill with any degree of accuracy, two persons should be present, one in the front, and the other on the flank, to observe the dressing. Young officers should be exercised themselves in the presence of a superior officer; for upon them thereafter will greatly depend the movement of the battalion in line or column.

Marching to the front in close order, is when any number of men advance by ranks at close order, and dress to some given objects each man lightly touching his next man, without crowding or pressing. The march in front by closed files is much easier than that at open files, because every man feels his next man, which ever way the rank dresses, and into whatever direction the line or column moves.

To FILE, is to advance to, or move from any given point by files; as to file to the front, to file to the rear, to file from the right or left flank, or to file from any given company. In some of which cases, the leading files must disengage themselves according to the directions given.

To FILE *off*, } to wheel off from marching in a spacious front,
To defile, } and march in length by files. When a regiment is marching in full front, or by divisions or platoons, and comes to a defile or narrow pass, it may file off to the right or left, as the ground requires, &c.

FILINGS, are movements to the front, rear, or flank by files. These movements must be executed with great quickness. The files must go off at a smart gallop, and continue so till all are in file, the rear rank men dressing well to their front rank; the front rank covering well, and keeping close to the croup. If the filings are to be made from a flank to the front or rear, the whole must keep passaging up to the ground from whence the first file went, before they go off; if to a flank, the horses must be turned as soon as there is room. If the filings are from a flank to march along the front or rear, past the other flank, every file must come off from its own ground as the next gets into file.

General and necessary FILINGS, are from either, or both flanks of the squadron to front, flank or rear; filing from the centre of the squadron to the front, or to the flank. Filing single men by ranks, or by front or rear rank men alternately from either flank of the squadron.

In the filings of the squadron, the *serre-files* take their places in the rear of the files unless the ground will allow them to remain on the flanks of the rear rank; but their general and proper position is in the rear of the files.

In cavalry filing, the greatest attention must be paid to keep the squadron as compact together as the nature of the movement will permit. It is a situation in which horses move free, and without confinement, but in which the parts of a squadron are apt to lengthen out, and take up much more ground than what they stand upon in line, and is therefore to be adopted only from necessity, in broken or embarrassed ground. When the word *file*, has been given, and the heads of the horses have been turned ready to move off without loss of distance, the leaders of files must go off short and quick in their ordered direction. They are followed close by each man as it comes to his turn, so as to leave no unnecessary interval from one to another, and instantly to put off the ground. After being once in file, a distance of a yard from head to tail may be taken so as to trot or gallop the easier if required. Every alteration of pace ought to be made as much as possible by the whole file at once: if this is not observed, a crowding and stop in the rear will always attend such alteration.

FIRE, in the art of war, a word of command to soldiers of all denominations, to discharge their fire arms, grenades, cannon, &c.

FIRE, is also used to denote the discharge of all sorts of fire arms against the enemy. The fire of the infantry is by a regular discharge of their fire-locks, in platoons, divisions, &c. that of the cavalry, with their pistols; and that of a place besieged with their artillery.

FIRE *of the curtain or second flank*, is from that part of the curtain comprehended between the face of the bastion prolonged and the angle of the flank; frequently called the line of defence fichant.

FIRE *rasant*, is produced by firing the artillery and small arms in a line parallel with the horizon, or parallel with those parts of the works you are defending.

FIRE-*arms*, are all kinds of arms charged with powder and ball; every one of which is mentioned under its respective head.

Running-FIRE, is when a rank or ranks of men, drawn up, fire one after another; or when the lines of an army are drawn out to fire on account of a victory; when each squadron or battalion takes it from that on its right, from the right of the first line to the left, and from the left to the right of the second line; also called *feu de joie*.

FIRE-*balls*. See BALLS.

FIRE-*cross*, an ancient token in Scotland for the nation to take up arms.

FIRE-*ship*, a ship filled with a variety of combustibles to set fire to the vessels of the enemy.

FIRE-*ship*. *Proportion of combustible stores for a fire-ship of* 150 *tons*.

	No.
Fire barrels, filled with composition	8
Iron chambers, to blow open the ports	12
Composition for priming barrels	3½
Quick match do.	1
Curtains, dipped	48
Reeds, long, single dipped	150
Do. short, double dipped	75
Do. short, single dipped	75
Bavins, single dipped	250

The fire barrels are about 2 feet 4 inches high, and 1 foot 6 inches diameter. Each barrel must have four holes of about 6 inches square cut in its sides; and these holes must have a square piece of canvass nailed over them quite close. They are then filled with the same composition as for carcasses, and 4 plugs of about 1 inch diameter and 3 inches long, and well greased are thrust into the top, and then left to dry. When dry, these plugs are taken out and the holes driven with fuze composition and quick match at the top; which goes from one hole to the other: after this the top is smeared over with mealed powder mixed up with spirits of wine. When dry again a sheet or two of brown paper is laid over the top, and then one of the canvass covers, which is made secure by the upper hoop of the barrel.

Composition for dipping Reeds, Bavins, and Curtains.

	lbs.
Rosin	120
Coarse Sulphur	90
Pitch	60
Tallow	6
Mealed powder	12

This proportion will dip about 100 reeds and 25 bavins.

Each curtain contains 1 square yard of barras.

Each cover for fire barrels 1 do. of sacking.

Immediately that the curtains, covers, &c. are dipped, they are to be strewed over with fine brimstone, before the composition grows cold.

The iron chambers, for blowing open the ports, hold from 9 to 11 ounces of powder. They are fixed in such a manner as to prevent their recoil, and to ensure the ports being blown open. The vents are generally corked up, and covered with a piece of barras, till required to be primed.

To fit out a fire ship. The whole breadth of the fire room is to be divided into 9 parts, and troughs laid the whole length of the room. Cross troughs of communication are laid between them, about 20 in each row, perpendicular to the long troughs. These troughs are usually 4 inches wide, and 4 deep. There are two fire trunks and two fire scuttles on each side, under which the eight fire barrels are to be placed.

The reeds and bavins are to be tied down in the troughs. The curtains are to be nailed up to the beams, equally through the fire room. The ship is not to be primed when fitted out, but only when intended to be fired.

To Prime.

Composition for priming,

Saltpetre pulverized .	22lbs.	8oz.
Rosin . .	2	11
Sulphur . .	18	—
Mealed powder .	45	—
Linseed oil . .	1 pint.	

All the reeds and bavins are to be taken up, and a little of the above composition sprinkled in the bottom of the troughs; the reeds, &c. to be then gently tied down again. Quick match of 6 or 8 threads doubled must be laid along on the tops of all the reeds, &c. and priming composition strewed over it, and over all the fire room. The covers of all the fire barrels must be cut open, and made to hang down on the sides of the barrels. Leaders of strong quick match must be laid from the reeds to the barrels and to the chambers; and must be tied down to the vents to ensure its not falling off. Strong leaders of quick match, 4 or 5 times doubled, must be laid from the reeds to the sally ports; and the sally ports must be connected by quick match, that the whole may take fire at once.

The following method is now adopted of producing an external fire, in addition to the internal fire, before gained by the fire room.

Fire boxes filled with the carcass composition, are distributed in the following manner, in a ship of three masts:

1	Suspended from each of the catheads and davits, on each side the bow	4
8	Slung across the bowsprit	8
4	Across each of the outriggers abaft . .	8
2	From the graplins of each of the lower yard-arms . .	12
2	From the dead-eyes on each side of the three round tops .	6
2	From the middle of the inside of the main, fore, and mizen shrouds . .	6
		44

The boxes are suspended by chains and hooks, and those slung across the bowsprit and outriggers, are fixed by staples. The two inner ones are laid with leaders of quick match, which fire instantly, or with portfires, which burn a given time; they communicate with the outer ones by reeds, which are tied down on the bowsprit and outriggers. The boxes hanging from the dead-eyes and shrouds, are fired by curtains suspended from the shrouds, the lower one of which hangs immediately over one of the large fire barrels. The two boxes on each yard-arm are hung one over the other; the upper one having a leader of quick match carried along the yard from the shrouds; and in burning will no doubt fire the lower one. Besides the boxes, there are fire barrels arranged as follows; 2 half barrels on the forecastle; 2 abaft the main deck, and 4 on the main deck; 2 in each roundtop, placed against the masts; and 4 large fire barrels under fire trunks, to convey fire to the curtains on the shrouds. All these fire barrels and boxes are to be fired by separate leaders of quick match or portfire, in order that any part of the ship may be fired, to cover its approach by the smoke; and the remaining part instantaneously upon quitting the ship. It has been found by experiment, that two men with lighted portfires can set fire to the whole of the leaders on the deck, bowsprit, catheads, outriggers, &c. in less than a minute; therefore the risk of trusting to one main leader to the whole may be avoided.

The leaders are laid in painted canvass hose made for the purpose.

Fire-*master*, in the artillery, gives the directions and proportions of all ingredients for each composition required in fire-works, whether for the service of war, or for rejoicings and recreations.

Fire-*masters-mate.* His duty is, to aid and assist the chief fire-master, and he should be skilled in every kind of laboratory works.

Fire-*pan of a gun*, is the receptacle for the priming powder.

Fire-*pot*, in the military art, a small earthen pot, into which is put a charged grenade, and over that, powder enough to cover the grenade; the whole covered with a piece of parchment, and two pieces of quick match across lighted: it breaks and fires the powder, as also the powder in the grenade, which has no fuze, that its operations may be quicker: it burns all that is near it.

Fire-*works*, are particular compositions of different sorts, made with sulphur, salt-petre, and charcoal. They are used in war, and on rejoicing days.

Fire-*workers*, were formerly subordinate to the fire-master and his mate; had afterwards the rank of youngest lieutenants to the regiment of artillery; but now that rank is abolished, and they are all second lieutenants. They were supposed to be well skilled in every kind of laboratory-work, which knowlege is an essential qualification in every officer of that regiment.

Fire-locks, so called from their producing fire of themselves, by the action of the flint and steel; the arms carried by a foot-soldier: they were formerly 3 feet 8 inches in the barrel, and weighed 14lb. at present the length of the barrel is from 3 feet 3 inches to 3 feet 6 inches, and the weight of the piece from 9 to 12lb. British fire-locks carry a leaden bullet of which 29 make 2lb. its diameter is .550 of an inch, and that of the barrel 1-50th part of the shot. Fire-locks were first made use of in 1690, when match-locks were universally disused; but when invented we cannot ascertain. A fire-lock is called, by writers of about the middle of the last century, *snaphaan*, which being a low Dutch word, seems to indicate its being a Dutch invention. Formerly, both in the manual and platoon exercises, the term fire-lock was always adopted—as shoulder your fire-lock, present your fire-lock—At present a more simple and brief mode of expression prevails as, *shoulder arms*, *carry arms*, &c.

FIRING *in line*. According to regulations, the following principal heads constitute firing in line.

The object of fire against cavalry is to keep them at a distance, and to deter them from the attack; as their movements are rapid, a reserve is always kept up. But when the fire commences against infantry, it cannot be too heavy, nor too quick while it lasts; and should be continued till the enemy is beaten or repulsed. This may not improperly be called offensive fire.

Defensive fire, belongs principally to infantry, when posted on heights, which are to be defended by musquetry. As soldiers generally *aim too high*, and as fire is of the greatest consequence to troops that are on the defensive, the habitual mode of firing should therefore be rather at a low level of three or four feet than a high one.

On these occasions the men are generally drawn up 3 deep; in which case the front rank may kneel when it can be safely and usefully done; but this is now generally rejected, and the third rank loads for the centre rank, which fires the guns of both centre and rear rank.

FIRING *by half battalions, the line advancing*. The left wings *halt*, and the right ones continue to march 15 paces, at which instant the word *march* being given to the left wings, the right at the same time are ordered to *halt*, *fire*, and *load;* during which the left march on and pass them, till the right wings, being loaded and shouldered, receive the word *march*, on which the left ones *halt*, *fire*, &c. and thus, they alternately proceed.

FIRING *by half battalions, the line retiring*. The right wings come to the right about and march 15 paces, are ordered to *halt*, *front*, and when the left wings have gained 15 paces, and have received the word *halt*, *front*, the right wings are instantly ordered to *fire*, *load*, *about*, and march 15 paces beyond the left ones, where they receive the word *halt*, *front*, on which the left wings *fire*, &c. and thus alternately proceed.

In manœuvring many battalions there should be a regulating battalion named, by the half battalions of which each line may move, halt, and fire: the commander of each line to be with such half battalion and in giving his several commands to have an attention to the general readiness of the line, especially after loading, that the whole be prepared to step off together at the word *march*. The firing of the advanced wing succeeds the *march*, or the *halt*, *front*, of the retired wing instantly; and each half battalion fire independent and quick, so that no unnecessary pauses being made betwixt the firing words, the fire of the line should be that of a volley as much as possible; and the whole being thereby loaded together, to be ready for the next command of movement. In these firings of the line advancing or retiring, the two first ranks fire standing, and the rear rank support their arms, and may change places at the second fire with the centre rank.

In this manner also may the alternate battalions of a line advance or retire, and when the whole are to form, and that the last line moves up to the first, every previous help of advanced *guides* will be given to ensure its correctness.

Fire in line advancing, is when the infantry marches in line to attack the enemy and in advancing makes use of its fire On these occasions it is better to fire the two first ranks only standing, reserving the third, than to make the front rank kneel, (as was formerly the practice) and to fire the whole; but when it is necessary to fire a considerable distance, or on a retiring enemy, vollies may be given by the three ranks, the front one kneeling.

FIRING *by platoons* is practised when a line is posted, or arrives at a fixed situation. In this position battalions fire independent of one another, and the fire generally commences from the centre of each. The first fire of each battalion must be regular, and at established pauses and intervals; after which each platoon may continue to fire as soon as it is loaded independent and as quick as possible. The use of this is to acquire the habit of obedience to command; for in close action platoon firing is both absurd and impracticable.

FIRING *by files*, is generally used behind a parapet, hedge, or abbatis. In this situation the two first ranks only can fire, and that must be by the 2 men of the same file always firing together, with coolness and deliberation. When however, the parapet, hedge, or abbatis is but a little raised, platoon firing may be resorted to.

Oblique FIRING *by battalions*, or otherwise, according to the ground, is extremely advantageous when it is found expedient to give an oblique direction to part of a line, or when it is discovered that their fire can in this manner be thrown against the opening of a defile, the flanks of a column, or against cavalry or infantry that direct their attack on some particular battalion or portion of the line. See *Am. Mil. Lib.*

Oblique firing, is either to the right and left, or from the right and left to the centre, depending entirely on the situation of the object to be fired against. The Prussians have a particular contrivance for this purpose: If they are to level to the right, the rear ranks of every platoon are to make two quick but small paces to the left, and the body of each soldier to quarter face or turn 1-8th of a circle; and are to take the same distance to the right if they are to level to the left.

When a line halts at its points of firing, no time is to be lost in scrupulous dressing, and the firing is instantly to commence. But when a line halts, and is not to fire, the usual dressings must be attended to; and every thing will depend upon the coolness and attention of the officers and non-commissioned officers.

It should be observed with respect to firings in general, that after the march in front, and halt of the battalion, company, or platoon, firing ought invariably to begin from the centre, and not from the flank. In other cases, and in successive formations, it may begin from whatever division first arrives, and halts on its own ground.

Square Firing, is that method of firing where either a regiment or any body of men are drawn up in a square, each front of which is generally divided into divisions or firings, and the flanks of the square, as being the weakest part, are sometimes covered by platoons of grenadiers who flank the angles. The first fire is from the right division of each face; the second fire from the left division of each face, and so on; the grenadiers making the last fire.

Street Firing, is the method of firing adopted to defend or scour a street, lane, or narrow pass of any kind; in the execution of which the platoon must be formed according to the width of the place, leaving sufficient room on the flanks for the platoons which have fired, successively to file round to the rear of the others.

Street Firing *advancing*. When the column has arrived at the spot where the firing is to commence, the commanding officer from the rear gives the word *halt!* and the officer commanding the platoon, orders it to *make ready*, *aim*, *fire*; *recover arms*, *load*; he then orders the rear platoon of the column *outward face*, (by half platoons) *quick march*.

At the instant the men in the first platoon recover their arms after firing, the rear platoon *makes ready*, and moves up the flank to the front of the first platoon having filed round the flanks towards the front, when the second from the rear advances, with recovered arms, until it receives the words *halt*, *ready*, *aim*, *fire*.

The platoon which has fired, primes and loads in its ground immediately, without moving; the rear platoons only advancing.

Street Firing *retiring*, is conducted on the same principles, except that the platoons fire without advancing, on the front being cleared by the former platoon filing round the flank.

Another method of *street firing*, *advancing*, generally esteemed more eligible, is, after firing, to wheel out by subdivisions, (the pivots having taken a side step to right and left outwards) prime and load, and as soon as the last platoon has passed, file inwards and form.

FISSURE, a narrow chasm where a small breach has been made.

FIT. Qualified, proper; adapted to any purpose or undertaking.

Fit *for service* strong, healthy men, from 18 to 45 years of age, of a certain height, and not subject to fits; are considered fit objects for service, and may be enlisted into the United States regiments. The principal heads under which every recruit should be rejected, consist of rupture, venereal lues, or incurable pox, habitual ulcers, sore legs, scurvy, scald head, and fits.

Fit, a paroxysm. Any violent affection of the body, by which a man is suddenly rendered incapable of going through the necessary functions of life.

Fits, habitual affections of the body to which men and women are subject, and by which they may be frequently attacked without any other immediate consequence, than a temporary suspension of the mental powers, accompanied by a disordered and painful action of the frame.

Fix-*Bayonets*, a word of command in the manual exercise. See Manual.

FLAGS in the United States navy, are the colors of the Union, red and white alternate stripes, equal to the number of states; with a square in the upper angle of blue, upon which are wrought white stars equal in number to the states of the Union. A custom has grown up among commanders of ships of appropriating a peculiar flag for each state, but as this is not a settled regulation requires no further notice.

Flags. See Colors, Standards, &c.

Flags, in the British navy, are either red, white, blue, or yellow, and they are hoisted either at the heads of the main-mast, fore-mast, or mizen-mast.

Flags, when displayed from the top of the main-mast, are the distinguishing marks of admirals; when from the fore-mast, of vice admirals; and when from the mizen-mast, of rear admirals.

The highest flag in the British navy, is the *anchor and cable*, which is only displayed when their lord high admiral, or lords commissioners of the admiralty are on board; the next is the *union*, the distinction peculiar to the second officer, called admiral of the fleet; and the lowest flag is the *blue* at the mizen-mast.

FLAG-*Officer*, a naval officer commanding a squadron.

FLAG-STAFF, the staff on which the flag is fixed.

FLAM, a word formerly made use of in the British service, signifying a particular tap or beat upon the drum, according to which each battalion went through its firings or evolutions. The practice is laid aside, as only a matter of mere parade without any practical utility; too often employed by officers to cover their ignorance or incapacity, or to indulge their indolence; therefore it is the usage now wherever discipline is well understood and practised, for every battalion, troop or company to be exercised by specific words of command, delivered in a distinct and audible tone of voice.

FLAMME, or ORIFLAMME, *Fr.* in the old French marine establishment, was a mark of distinction which exclusively belonged to the French king's ships.

FLAMME, *ou pendant*, Fr. Bolting cloth or ticking. It is a long streamer which generally hangs either from the topmast head, and serves for ornament, or to give signals.

FLAMBEAU, a torch.

FLANC *du bastion*, Fr. See flank of the bastion.

FLANC { *bas*, *couvert*, *retiré*, } See *Retired* FLANC.

FLANKS, in the art of war and in fortification, are of several denominations, according to their uses, viz.

FLANKS *of an army.* Certain proportions of offensive or defensive forces which are extended to the right and left of a main body, and ought to be posted in such a manner, that it would be certain ruin to the enemy were he to attempt any impression between them. In a more confined sense, the troops which are stationed on the right and left of each line of encampment. See WINGS.

FLANK-*files*, are the two first men on the right and the two last men on the left, telling downwards from the right, of a line, battalion, company, division, subdivision or section. When a battalion is drawn up three deep, its flank files consist of three men, or as the French call its file and demi-file. When four deep, the flank files are termed double files; so that a column formed from any of these alignements will have all its relative flank files, be the depth of formation what it will.

Inward FLANK *in manœuvring.* The first file on the left of a division, subdivision, or section when the battalion stands at close or open column with the *right in front*. Upon this flank, which is called the proper flank, and on which the pivot rests, the division, &c. wheels backward from line into column, or forward from column into line. When the left is in front the right becomes the proper flank and pivot.

Outward FLANK, of a line or battalion, the extreme file on the right or left of a division, subdivision, or section, according to the given front, when the battalion is at close or open column, and which is the furthest wheeling point from line into column, or from column into line. It is likewise called the *reverse* flank. The general rule which directs, that leading officers shall march invariably on the inward flank, where the proper pivot rests, is in one instance dispensed with, when, after marching by the right in front, the wheeling of the column or guard is to the right. On this occasion, the officer who had shifted from the right to his proper flank, instead of being wheeled upon, wheels with the flank, and continues his march. It has been remarked in a late military publication, that the squareness of the division would certainly be preserved with greater ease, were the officer to remain upon the right, though the right be in front, until the wheel in that direction should be completed, when he might shift to his proper flank. Where the column or guard has only a few paces to proceed beyond the passing or saluting point, this certainly is advisable. The regulation of guides, that is, non-commissioned officers on both flanks of every subdivision of a line, renders it of less moment where the officer is posted; but the pivot is the most rational position

FLANK *company*, a certain number of men drawn up on the right or left of a battalion. Thus where there are grenadiers they compose the right, and the light infantry the left flank company. When these are detached, the two extreme battalion companies become such.

The grenadiers and light infantry are generally called flank companies, whether attached or not to their several battalions; rifle corps are always flankers.

FLANKING *party*, a select body of men on foot or on horseback, whose object is to harrass and perplex the enemy, to get upon his wings, or by any manœuvre to hang upon the flank of an opposing force.

FLANK *en potence*, is any part of the right or left wing formed at a projecting angle with the line. See POTENCE.

Leading FLANK, when the line breaks into column in order to attack an enemy, it is the flank which must almost always preserve the line of *appui* in all movements in front. The first battalion, division or company of every column which conducts is called the head or leading flank of that column. All the writhings and turnings to which it must unavoidably be subject, are followed by every other part of the body, and such head becomes a flank, right or left, when formed into line. The commander must therefore be on whichever flank directs the operations of the line, and by which he proposes to attack, or to counteract the attempts of the enemy.

FLANK in fortification, in *general*, is any part of a work that defends another work, along the outside of its parapet.

FLANK *of a bastion*, in fortification, that part which joins the face to the curtain, comprehended between the angle of the curtain and that of the shoulder, and is the principal defence of the place. Its use is, to defend the curtain, t'

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flank, and face of the opposite bastion, as well as the passage of the ditch; and to batter the salient angles of the counter-scarp and glacis, from whence the besieged generally ruin the flanks with their artillery; for the flanks of a fortification are those parts which the besiegers endeavor most to ruin, in order to take away the defence of the face of the opposite bastion.

Oblique } *Second* } Flank, { that part of the curtain from whence the face of the opposite bastion may be discovered, and is the distance between the lines rasant and fichant, which are rejected by most engineers, as being liable to be ruined at the beginning of a siege, especially when made of sandy earth. The second parapet, which may be raised behind the former, is of no use; for it neither discovers nor defends the face of the opposite bastion: besides, it shortens the flank, which is the true defence; and the continual fire of the besiegers' cannon will never suffer the garrison to raise a second parapet. This second flank defends very obliquely the opposite face, and is to be used only in a place attacked by an army without artillery.

Retired } *Low* } *Covered* } Flank, { the platform of the casemate, which lies hid in the bastion. These retired flanks are a great defence to the opposite bastion and passage of the ditch; because the besiegers cannot see, nor easily dismount their guns.

Flank *prolonged*, in fortification, is the extending of the flank from the angle of the epaule to the exterior side, when the angle of the flank is a right one.

Concave Flank, is that which is made in the arc of a semi-circle bending outwards.

Flanks *of a frontier*. Are the different salient points of a large extent of territory, between each of which it would be impolitic for any invading army to hazard an advanced position. The late celebrated gen. Lloyd (whose accuracy of observation and solidity of conclusion with respect to the iron frontier of old France have been universally acknowleged) has furnished military men with a full and succinct account of the relative positions upon it. This long line he begins at Basle in Switzerland, and runs into various directions from thence to Dunkirk in old French Flanders, he divides it into three parts, and considers each of them separately. The first part goes from Basle to Landau and covers old Alsace, near 130 miles in length. The second from Landau to Sedan on the Moselle, covers ancient Lorrain on the side of Treves, Deux-Ponts, Luxemburgh, and Limburg; 190 miles in length. From Sadan down the Meuse to Charlemont in old Flanders, and thence to Dunkirk, is the third part, and is about 150 miles; so that the whole natural frontier of old France was 470 miles. The greatest part, if not the whole of which, is in the shape of a horse shoe, and presents impregnable flanks. An anonymous writer, after referring the reader to general Lloyd for a specific account of the first and second lines of the French frontier, has made the following observations relative to the third and last which runs from Sedan down the Meuse to Charlemont, from thence to Dunkirk, and is 150 miles in length. His words are—While the duke of Brunswick and the king of Prussia were ruining the most formidable armies in Europe by endeavoring to penetrate a few miles into Lorrain and Champagne through the first and second line, (without having previously secured the two flanks,) the French with redoubled activity operated upon the third, and finally subdued all Flanders. Those very difficulties, in fact, which presented themselves to oppose the progress of the allied army into France, facilitated every excursion on her part, as *the direction of the line which goes from Sedan to Landau is concave towards that part of Germany*.

The remainder of this line, (within which so many faults were committed, or rather could not be avoided, because the impression itself was founded in error,) runs to Dunkirk. It has been the scene of successive wars for near two centuries, the most expensive, bloody, and durable of any recorded in the annals of mankind. This line, continues general Lloyd, is stronger by art than nature, having a prodigious number of strong fortresses and posts upon it, moreover it projects in many places, so that an enemy can enter no where, without having some of them in front and on his flanks.

The United States are flanked by Canada and Florida.

Flanks, in farriery, a wrench, or any other grief in the back of a horse.

To Flank, in fortification, is to erect a battery which may play upon an enemy's works on the right or left without being exposed to his line of fire. Any fortification, which has no defence but right forward, is faulty; and to make it complete, one part ought to flank the other.

To Flank, in evolutions, to take such a position in action as either to assist your own troops, or to annoy those of your enemy by attacking either of his flanks, without exposing yourself to all his fire.

To Out-flank. A manœuvre by which an army, battalion, troop, or company outstretches another, and gets upon both or either of its flanks.

To Out-Flank, in an extensive acceptation of the term, when applied to locality, means to possess any range of opposite parts, or territory, whence you might invade your neighbor. Thus France, by her present possessions along the Dutch and Flemish coasts, outflanks all the opposite shores of England, properly so called; resting her left flank at

Ushant in Finisterre, and her right at Schelling, in North Holland, in the Province of Friesland. By the conquest of Spain and Portugal, the French have extended their south western flank, and rendered the invasion of Ireland more easy. Ireland again is completely outflanked by Great Britain at Penzance, in Cornwall, and at the Hebrides or Western Isles, independent of the continental part of Scotland.

Flanker, a fortification jutting out so as to command the side or flank of an enemy marching to the assault or attack. Riflemen and all light troops are also called flankers.

Flankers, in cavalry manœuvres, the most active men and horses are selected to do the duty of flankers. The men of course must be perfect masters of their horses. One complete file of each four must be a file of flankers; it does not signify which file, but if it can conveniently be done, the centre file should be taken, as in that case neither the flank men, nor the telling off of the squadron or division will be affected.

When you manœuvre by *whole* squadrons, six or eight flankers are sufficient in general for the whole squadron.

The word of command, when the flankers come out to the front, is *flankers forward.*

In flanking, a great deal depends upon the officer or serjeant; he must be extremely active, and not only attend to the movements of the division from which he is detached, but likewise to his flankers.

As horses frequently refuse to quit the ranks and hang back obstinately, the men indiscriminately should be often called out of the ranks one by one, and practised as flankers.

To **Flanker**, in French *flanquer*. To fortify the walls of a city with bulwarks or countermines.

Flanking, is the same in fortification as defending.

Flanking party—Any body of men detached from the main army to get upon the flanks of an enemy. See **Flankers**.

Flanking *angle*, in fortification, that composed of the two lines of defence, and pointing towards the curtain. See **Tenaille**.

Flanking *line of defence*. See *line of defence.*

Flanking-point. See **Point**.

FLASH.—The flame which issues from any piece of ordnance on its being fired.

Flash *in the pan*, an explosion of gunpowder without any communication beyond the touch hole. When a piece is loaded, and upon the trigger being drawn, nothing but the priming takes fire, that piece is said to flash in the pan.

FLASK, a measure made of horn, used to carry powder in, with the measure of the charge of the piece on the top of it.

Flasques, *Fr.* in the artillery, are the two cheeks of the carriage of a great gun. See **Affut**.

Flasque likewise means a gun-powder flask.

FLAT-*bottomed boats*, in *military affairs*, are made to swim in shallow water, and to carry a great number of troops, artillery, ammunition, &c. They are constructed in the following manner: a 12-pounder, bow chase, an 18 ditto, stern chase; 90 to 100 feet keel; 12 to 24 ditto beam; 1 mast, a large square main-sail; a jib-sail: they are rowed by 18 or 20 oars, and can each carry 400 men. The gun takes up one bow, and a bridge the other, over which the troops are to march. Those that carry horses have therefore parts of the boats made to open.

FLAW, any crack or small opening in a gun or its carriage is so called.

FLEAU, *Fr.* the beam, or balance of a pair of scales.

There are some fleaux or scales among the French, which hold 6000 lb. weight in one scale, and 6000 lb. weight of ammunition in the other, making together 12000 weight.

Fleau *de fer*, an iron instrument or weapon, that resembles in shape the flails with which corn is thrashed.

FLECHE, in *field fortification*, a work of two faces, usually raised in the field, to cover the quarter guards of a camp or advanced post.

FLETCHER. See **Bowyer**.

FLIGHT, is used figuratively for the swift retreat of an army or any party from a victorious enemy.

To put to **Flight**, to force your enemy to quit the field of battle.

Flight, is likewise applicable to missile weapons or shot, as a flight of arrows, a flight of bombs, &c.

FLINT, a well known stone, used at present with every sort of fire arms. Every soldier ought to have one or two spare flints when on service.

Flints—are usually packed in half barrels.

			Weight.	
			qrs.	lbs.
One half barrel contains.	Musquet,	2000 —	2	14
	Rifle,	3000 —	2	10
	Pistol,	4000 —	2	15

The most transparent and free from veins are esteemed the best flints.

28 kegs of musquet flints take 18 cwt. in tonnage.

10 kegs of pistol flints take 3 cwt. 2 qrs. in tonnage.

To **Float**, a column is said to float when it loses its perpendicular line in march, and becomes unsteady in its movements.

FLOATING-*batteries*, vessels used as batteries, to cover troops in landing on an enemy's coast.

FLOGGING, a barbarous punishment in general use among the British foot soldiers. It is inflicted with a whip having several lashes, and is calculated to degrade and render the man totally unfit for a soldier. It is not practised in any other army in Europe.

FLOOD-GATE, in fortified towns, is composed of 2 or 4 gates, so that the besieged by opening the gates may inundate the environs so as to keep the enemy out of gun shot.

FLOOR. See PLATFORM.

To **FLOURISH**, in a general musical acceptation of the term, is to play some prelude or preparatory air without any settled rule.

A FLOURISH, any vibration of sound that issues from a musical instrument.

The trumpet FLOURISH in drawing swords, is used regimentally by corps of cavalry on their own ground, and is the sounding used in receiving a general officer.

FLOWER *de Luce*, } The arms of
FLEUR *de Lis*, } France under the old monarchy. They consisted in three flowers de lis *or*, or gold, in a field *azure*, or blue. These arms were superceded by the three colored flag, when the bastile was taken and destroyed by the inhabitants of Paris.

FLUSHED, a term frequently applied when men have been successful, as, flushed with victory, &c.

FLUTE, a wind instrument which is sometimes used in military bands; but never on service.

FLUX, an extraordinary evacuation of the body, to which soldiers are frequently subject on service. Towards the fall of the year this disorder is particularly prevalent, especially in camps. It is of a contagious nature, and the greatest care should be taken to prevent the healthy men in a regiment from frequenting the privies to which those infected by this cruel disorder are permitted to resort. A centry should always be posted in the vicinity of every hospital for that specific purpose.

FLYING- { *army*. See ARMY.
{ *bridge*. See BRIDGE.

FLYING *Artillery*. See HORSE ARTILLERY.

FLYING-*Camp*. See CAMP.

FOCUS, in *mining*. See MINE.

FODDER. See FORAGE.

FOE. See ENEMY.

FOIL, in *fencing*, a long piece of steel of an elastic temper, mounted somewhat like a sword, which is used to learn to fence with; it is without a point, or any sharpness, having a button at the extremity, covered with leather.

To FOIL, to defeat.

FOLLOWERS *of a camp*, Officers servants, sutlers, &c. All followers of a camp are subject to the articles of war equally with the soldiery.

FOND, ground, properly means the surface of the earth which lies above the water.

ONDEMENS, *Fr.* foundation.

FONDERIE, *Fr.* forge, *ou Fourneaux*. See FOUNDERY.

FONDS *destinés pour le payement, des troupes*. Fr. Monies issued for the service of the army.

FONTE *des pieces d' artillerie*. The metal used in the casting of cannon which consists of three sorts well mixed together, viz. copper, tin, and brass.

FOOT, in a *military sense*, signifies all those bodies of men that serve on foot. See INFANTRY.

FOOT is also a long measure, consisting of 12 inches. Geometricians divide the foot into 10 digits, and the digits into 10 lines; but we after the manner of the English divide the foot into 12 inches, and an inch into 12 lines, and a line into 12 points. The French call the 12th part of a foot, a *line*.

A square FOOT, is the same measure, both in length and breadth, containing 12 + 12 = 144 square or superficial inches.

A cubic FOOT, is the same measure in all the three dimensions, length, breadth, and thickness; containing 12 + 12 = 144 + 12 = 1728 cubic inches. The foot is of different length in different countries. The Paris royal foot exceeds the English by 9 lines; the ancient Roman foot of the capitol consisted of 4 palms = 11 4-10 English inches; and the Rhineland or Leyden foot, by which the northern nations go, is to the Roman foot as 950 to 1000. The proportions of the principal feet of several nations are as follow. The English foot divided into 1000 parts, or into 12 inches, the other feet will be as follow:

PLACES.	1000 parts	feet.	inch.	lines.
London foot -	1000	—	12	—
Amsterdam -	942	—	11	3
Antwerp - -	946	—	11	2
Bologna - -	1204	1	2	4
Berlin - -	1010	1	—	2
Bremen - -	964	—	11	6
Cologne - -	954	—	11	4
Copenhagen -	965	—	11	6
Dantzic - -	944	—	11	3
Dort - -	1184	1	2	2
Frankfort on the Main	948	—	11	4
The Greek -	1007	1	—	1
Mantua - -	1569	1	6	8
Mechlin - -	999	—	11	—
Middlebourg -	991	—	11	9
Paris Royal -	1068	1	—	9
Prague - -	1026	1	—	3
Rhineland -	1033	1	—	4
Riga - -	1831	1	9	9
Roman - -	967	—	11	6
Old Roman -	970	—	11	8
Scotch - -	1005	1	—	5-7
Strasbourg -	920	—	11	—
Madrid - -	899	—	10	7
Lisbon - -	1060	1	—	6
Turin - -	1062	1	—	7
Venice - -	1162	1	1	9

To be on the SAME FOOTING *with another*, is to be under the same circumstances in point of service; to have the same number of men, and the same pay, &c.

To gain or lose ground FOOT *by* FOOT, is to do it regularly and resolutely; defending every thing to the utmost extremity, or forcing it by dint of art or labor.

FOOT-*bank*, in fortification. See BANQUETTE.

FORAGE, in the art of war, implies hay, straw, and oats, for the subsistence of the army horses. This forage is divided into rations, one of which is a day's allowance for a horse, and contains 20 lb. of hay, 10 lb. of oats and 5 lb. of straw.

Dry FORAGE, oats, hay, &c. which are delivered out of magazines to a garrison, or to troops when they take the field, before the green forage is sufficiently grown to be cut or gathered.

Green FORAGE, oats, hay, &c. that have been recently cut. It likewise means meadow pasture, into which horses are turned.

When the British cavalry are stationed in barracks, the number of rations of forage to be issued to the horses of the officers, non-commissioned officers, and soldiers is not to exceed what follows, and is to be confined to those which are actually effective in the barracks.

	Rations.
Field officers, having 4 effective horses . . .	4
Captains, having 3 ditto .	3
Subalterns and staff officers, having 2 ditto . .	2
Quarter masters, each .	1
Non-commissioned officers and private men, each . .	1

For each of which rations a stoppage is to be made of 8½*d*. per diem.

On foreign service this article is governed by circumstances.

FORCE, an armament or warlike preparation.

FORCE, in a military sense, any body of troops collected together for warlike enterprize.

Effective FORCES. All the efficient parts of an army that may be brought into action are called effective, and generally consist of artillery, cavalry, and infantry, with their necessary appendages such as hospital staff, waggon-train, artificers and pioneers: the latter, though they cannot be considered as effective fighting men, constitute so far a part of effective forces, that no army could maintain the field without them.

Effective FORCES *of a country*. All the disposable strength, vigour and activity of any armed proportion of native or territorial population. The navy of Great Britain must be looked upon as part of the effective force of England, to which is added the body of marines.

Distribution of the effective FORCES *of a country*. Under this head may be considered, not only the effective forces which might engage an enemy, but likewise those included in the several returns that are made from home to foreign stations to the war office, and out of which a grand total is formed to correspond with the estimates that are annually laid before the government.

To FORCE is to take by storm; also to man the works of a garrison.

To FORCE *an enemy to give battle*. To render the situation of an enemy so hazardous, that whether he attempt to quit his position, or endeavor to keep it, his capture or destruction must be equally inevitable. In either of which desperate cases, a bold and determined general will not wait to be attacked, but resolutely advance and give battle; especially if circumstances should combine to deprive him of the means of honorable capitulation. This can only be safely effected, by having previously disposed your own forces so as to defy any impression on his part, and by subsequent able manœuvres to have it in your power to foil his attack.

To FORCE *a passage*. To oblige your enemy to retire from his fastnesses, and to open a way into the country which he had occupied. This may be done either by *coup de main*, or renewal of assaults. In either case, the advancing body should be well supported and its flanks be secured with the most jealous attention.

FORCING *an adversary's guard or blade*, a term used in the science of broad-sword.

"If at any time your antagonist appears languid and weak on his guard, and barely covers his body on the side he is opposed; by stepping well forward, and striking the fort of your sword smartly on his blade, you may be enabled to deliver a cut without risk, even at the part he intends to secure, taking care to direct your blade in such a manner, that the plate or cross bar of your hilt shall prevent his sword from coming forward."

Art of defence on foot.

FORCEPS, an instrument used in chirurgery, to extract any thing out of wounds or to take hold of dead or corrupt flesh, to amputate. It is made somewhat in the shape of a pair of tongs or pincers, with grappling ends. Every regimental surgeon, or assistant surgeon, should have a pair among his set of instruments.

FORD. The shallow part of a river where soldiers may pass over without injuring their arms.

FORE-RANK, first rank, front.

FOREIGN *service*, in a general sense, means every service but home. In a more confined and native acceptation of the term, it signifies any service done out of the limits of the United States, or the dependent territories,

Foreign *troops*, in an English acceptation, regiments or companies which are composed of aliens, as the Hessians in the American revolution. Before the present war, no foreigner could bear a commission in the British service, or be enlisted as a soldier.

FORELAND, in fortification, called by the French *pas de souris*, *relais*, *retraite*, *berm or lizier*, a confined space of ground between the rampart of a town or fortified place, and the moat. Whenever a fortification can be completed without having recourse to this substitute for stone, (with which the rampart ought to be faced) it certainly is advisable to go to the expence. For a bold enemy, who has once made his way over the moat, will derive considerable advantage from having this path to stand on. It is generally from 3 to 8 or 10 feet wide. This space serves to receive the demolished parts of the rampart, and prevents the ditch from being filled up. In Holland the foreland is planted with thickset, but it is generally faced with palisades. See Berm.

FORELAND, or **FORENESS**, } any point of land which juts out into the sea.

FORGE, in the *train of artillery*, is generally called a *travelling forge*, and may not be improperly called a portable smith's shop: at this forge all manner of smith's work is made, and it can be used upon a march, as well as in camp. Formerly they were very ill contrived, with 2 wheels only, and wooden supporters to prop the forge for working when in the park. Of late years they are made with 4 wheels, which answers the purpose much better.

Forge *for red hot balls*, is a place where the balls are made red-hot before they are fired off: it is built about 5 or 6 feet below the surface of the ground, of strong brick work, and an iron grate, upon which the balls are laid, with a very large fire under them. See Red-hot Balls.

FORKHEAD. See Barb.

FORLORN-*hope*, in the military art, signifies men detached from several regiments, or otherwise appointed to make the first attack in the day of battle; or at a siege, to storm the counterscarp, mount the breach, &c. They are so called from the great danger they are unavoidably exposed to; but the expression is old, and begins to be obsolete.

To **FORM**, in a general acceptation of the term, is to assume or produce any shape or figure, extent or depth of line or column, by means of prescribed rules in military movements or dispositions.

To **Form** *from file, among cavalry*. The front file halts at a given point: the rest, or remaining files successively ride up at a very smart gallop, taking care to halt in time, and not to over-run the ground. If the formation is by doubling round the front file, (in a formation, for instance, to the rear of the march, or to the right when marched from the right,) the files must double as close round as possible and with the utmost expedition. In forming from file, particular attention should be given to make the men put their horses quite straight as they come in. They must keep their bodies square, dress by a slight cast of the eye towards the point of formation, and close and dress in an instant. A dragoon, in fact, must no sooner get into the ranks, than his attention should be given to remain steady, well closed and dressed. It is generally required, that when the cavalry forms, each man must come up in file to his place, and by no means move up to his leader, till that leader has formed to which ever hand the file is forming to. The whole must follow the exact track of the first leader, and come up one by one into their respective places in squadron.

To **Form** *to the front*. To move nimbly up from file into ranks, and close to your leader, whether on foot, or horseback.

To **Form** *to the rear*. To double round your leaders, who have themselves turned and faced.

To **Form** *to a proper flank*. To turn and close in to your leader.

To **Form** *to a reverse flank*. To pass, turn and successively close to your leaders.

In all formations from file, the whole, till otherwise directed, dress to the hand to which the squadron, or division forms. See *Am. Mil. Lib.*

To **Form** *by moving in front, and successively arriving in line*, is by divisions, or distinct bodies, to advance forward by word of command towards any given point of alignement. On these occasions the eyes of the whole are turned to the hand to which they are to form, and from which they preserve required distances. The leading officer must be on the *inward* flank of his division; he conducts it to its point of junction in line, and from thence dresses and corrects it on the person, who is previously placed beyond him, and prolonging the general line. The outward flank of the last formed and halted body, is always considered as the point of conjunction (necessary intervals included) of the succeeding one. Thus the looking and lining of the soldier is always towards that point, and the flank of the line formed to; and the correction of dressing by the officer is always made from that point towards the other flank. Therefore on all occasions of moving up, forming and dressing in line, by the men lining themselves to one hand *(inwards)* and the officers correcting to the other *(outwards)* the most perfect line may be obtained. Commanding officers of regiments, when a considerable line is forming, must take every advantage from timeously throwing out intelligent *guides* to give them true points in the general line. In the French service these persons are called *jalonneurs* from *jalonner*, to fix any thing, by which any true direction, perpendicular or otherwise, may be obtained; the word *guide* is the best translation of the word *jalonneur*, and it is so used in the American Military Library.

To FORM *line*, is to wheel to the right or left from open column of divisions, subdivisions, or sections, according to prescribed rules, so as to present one continued front or straight line; or to deploy from close column for the same end, or to file to the front.

To FORM *rank entire*, is to extend the front of a battalion or company by reducing it to the least possible depth, from any existing number of ranks.

To FORM *two deep*, is from rank entire or from three deep to produce a regular line of files.

To FORM *three deep*, is to add the depth of one half file to two deep, and to produce the natural formation of a battalion in line.

To FORM *four deep*, is to diminish the natural extent of a battalion formed in line, by adding one half-file to its depth.

To FORM *echellon*, is, from line, or open column, to wheel a given number of paces forward or backward, so as to produce a diagonal or oblique direction in the different proportions of a line, the outward flank of each succeeding division, company or section, constantly preserving a perpendicular direction, at a regulated distance, from the inward flank of its leader, until it arrive at its point of junction.

To FORM *line by echellon*, is to advance in column towards any given object by a diagonal movement, so as eventually to produce a regular continuity of front. See ECHELLON or DIAGONAL *movement*.

To FORM *close column*, is to march by files in detached proportions of a line, till each proportion shall arrive in front or in rear of any given body.

To FORM *open column*, is to wheel backwards or forwards, or to march out by files, so that the several proportions of a line may stand in a perpendicular direction to one another, with intervals between them equal to the extent of their front.

To FORM *circle*, is to march a battalion or company standing in line from its two flanks; the leading files bringing their right and left shoulders forward, so as to unite the whole in a circular continuity of files. On the word of command—*To the right and left, form circle*, the two flank files bring their right and left shoulders forward; and on the word *quick, march*, the whole advance. The centre marks time, each file from the direct central one gradually inclining to right and left till the junction of the two extremes has been completed.

The general use which is made of this formation is to punish offenders, or to convey public orders to the men in such a manner, that every individual may have an equal opportunity of hearing what is read, or delivered to the whole battalion.

To FORM *on*, is to advance forward, so as to connect yourself with any given object of formation, and to lengthen the line.

To FORM *on a front division*, is from close, or open column, or by the march in echellon, to arrive by a parallel movement at the right or left of any given division, by which means a prolongation of the line is produced. When this formation takes place with the right in front, the officer of the second, or leading division (the first standing fast, and all the rest facing to the left) having stepped out to the right at the words *quick march!* allows his division led by his serjeant to go on a space equal to its front, and then gives his word *front, dress, halt*; his serjeant still remaining on the left of his division. The officer being still on the right of his division, immediately gives the word *march!* and the division proceeds at the ordinary step towards its place in the alignement. He steps nimbly forward, and obliques so as to be within the third file of the left flank of the preceding division, and is thus ready to give the words, *dress, halt!* at the instant his inward flank man joins that division. He then expeditiously corrects his men, (who have dressed upon the formed part of the line, on the distant given point) and resumes his proper post in line. Great care should be taken in these movements to prevent the outward flank of every advancing division from over-stepping its ground; as it is a general principle in dressing, to be rather behind the preceding formed division at the word *dress*, than before it; the word *halt* being the final and conclusive direction, and the dressing of ranks being more easily attained by a forward than a backward movement.

In this manner every other division proceeds; each officer advancing, with a firm, steady step, in a perpendicular direction towards his point of formation, while the flank serjeant remains at his point in the line, till the succeeding officer, who has dressed his division, arrives to replace him; after which the serjeant covers his own officer.

To FORM *on a rear division*, is to face all the preceding divisions which are in column to the right, (the point of forming having been previously taken in that direction, as far as the prolongation of the head division will extend, and just beyond where the right of the battalion is to come) and to uncover the rear one, so as to enable it to advance forward to a given point on the left, and take up its place in the alignement.

The leader of the front or head divi

having been shewn the distant point in the alignement on which he is to march, and having taken his intermediate points, if necessary, at the word *march*, the faced divisions step off quick, heads of files are dressed to the left, the front one moves in the alignement with scrupulous exactitude, and the others continue in a parallel direction close on its right; each carefully preserving its relative points of prolongation, and being fronted by its officer the instant it gets upon the ground, which is perpendicular to its intended formation in line.

As soon as the rear division is uncovered, and has received the word *march*, it proceeds forward, and when arrived within a few paces of its ground, the officer commanding steps nimbly up to the detached officer or serjeant, who has carefully marked its left in the new position, gives the words *dress*, *halt*, and quickly corrects his division on the distant point of formation; after which he replaces his serjeant on the right of his division. As the officer who conducts this division has necessarily the longest extent of ground to march on, he must take especial care to observe his perpendicular direction, constantly keeping the different points of formation in his eye, and preserving a perfect squareness of person. The intermediate divisions will successively proceed and advance as the ground opens before them.

To FORM *on a central division.* To execute this manœuvre, the front and rear divisions must deploy, or open, so as to uncover the named division, and enable it to move up to a given point of alignement. A forming point must be given to both flanks in the prolongation of the head division.

When the caution of forming on a central division has been given, the leading officers will shift to the heads of their several divisions, the instant they have been faced according to the hand which leads to their ground. The files during their deployment must be kept close, and well locked up; and when fronted, must instantly be corrected in their dressing before they march forward. The central division, when uncovered, moves up into line to its marked flank. Those that were in front of it proceed as in forming on a rear division; those that were in rear of it proceed as in forming on a front division. By means of those three formations, which are effected by the deployment, or flank march, every battalion in close column, may uncover and extend its several divisions. The previous formation of close column upon given proportions of a brigade, battalion, &c. is done by facing and moving *inwards*, and thus contracting the original line with any given division for the head; which line may again be restored by the different divisions facing and moving *outwards*, as we have just described.

To FORM *line on a rear company of the open column standing in echellon*, that company remains placed; the others face about, wheel back on the pivot flanks of the column, as being those which afterwards first come into line. On the word *march*, they move forward, and then *front*, *halt*, *dress*, successively, in the line of the rear company.

To FORM *line on the rear company facing to the rear of the open column standing in echellon*, the whole column must first countermarch, each company by files, and then proceed as in forming on a front company.

To FORM *line on a central company of the open column*, that company stands fast, or is wheeled on its own centre into a new required direction. Those in front, must be ordered to *face* about. The whole, except the central company, must wheel back the named number of paces. Those in front, on the proper pivot flanks of the column, and those in its rear on the reverse flanks, such being the flanks that first arrive in line. The whole then marches in line with the central company. See *Am. Mil. Lib.*

To FORM *line from close column on a rear company facing to the rear*, the whole of the column changes front by countermarching each company by files. The rear company stands fast, and the remaining companies face to the right, deploy, successively *front*, *halt*, *dress*, and move up into the alignement.

To FORM *line from close column on a central company facing to the rear*, the central company countermarches and stands fast; the other companies face outwards, countermarch, deploy, and successively march up to the alignement.

Whenever the column is a retiring one, and the line is to front to the rear, the divisions must each countermarch before the formation begins. In which case the head would be thrown back, and the rear forward.

To FORM *en potence*, to wheel the right or left flank of a body of men, or to march them forward by files, so as to make that proportion of a line face inwards, and resemble a potence or angle. A double potence may be formed by running out both flanks, so that they stand in a perpendicular direction facing towards each other like the letter Λ, or thus, \—/; these oblique lines are the potence, so named by the power of their cross fire. This formation is not only extremely useful on actual service, but it conduces greatly to the accommodation of any body of men which may be marched into a place that has not sufficient extent of ground to receive it in line.

FORMATION, in a military sense, the methodical arrangement, or drawing up of any given body of men mounted, or on foot, according to prescribed rules and regulations.

Cavalry FORMATION, consists of the following proportions.

Squadrons of cavalry are composed each of two troops; regiments are composed of ten.

FORMATION *of a troop*, is the drawing out of a certain number of men on horseback on their troop parade, in a rank entire, fixed according to the size roll, the tallest men in the centre.

FORMATION *of the squadron*, is the military disposition of two troops that compose it closed into each, from their several troop parades. In this situation, the officers move out, and form in a rank advanced two horses length, fronting to their troops. The serjeants and covering corporals rein back, and dress with the quarter-master in the rear. When the formation of a squadron has been completed, and its component parts have been accurately told off, the commanding officer is advanced a horse's length before the standard. Two officers are posted, one on each flank of the front rank, covered by a non-commissioned officer. One officer is posted in the centre of the front rank with the standard, and is covered by a corporal. The serjeants are placed, one on the right of the front of each of the four divisions, except the right one, and each is covered by a corporal or private dragoon. The serre-files or supernumerary officers and serjeants, the quarter-masters and trumpeters, are in the rear of their several troops, divided in a line, at two horses distance from the rear rank. Farriers are behind the serre-files a horse's length. Allowance is always made for sick and absent officers and non-commissioned officers; and if a sufficient number of any rank is not present, then serjeants replace officers, corporals replace serjeants, and lance-corporals or intelligent men replace corporals.

Formation, considered as to general circumstances, admits of a few deviations from the strict letter of the term. In order to preserve each troop entire, it is not material, if one division be a file stronger than another. The flank divisions indeed, both in cavalry and infantry regiments, will be strongest from the addition of officers. Officers, in the formation of squadrons, are recommended to be posted with their troops. Corporals not wanted to mark the divisions, or to cover officers or serjeants, will be in the ranks according to their size, or be placed in the outward flank file of their troops. Farriers are considered as detached in all situations of manœuvre.

All these general circumstances of formation apply and take place, whether the squadron be composed of two, or more troops, and whether the troops be more or less strong.

General modes of FORMATION, are when a regiment broken into and marching in open column, must arrive at and enter on the ground on which it is to form in line, either in the *direction* of that line, *perpendicular* to that line, or in a direction more or less *oblique* betwixt the other two.

Infantry FORMATION, is the arrangement or disposition of any given number of men on foot according to prescribed rules and regulations. When the companies join, which are generally ten in number, the battalion is formed; there is not to be any interval between the relative parts, but the whole front must present a continuity of points, and one compact regular line from one flank file to the other.

The formation or drawing up of the companies will be from right to left. There is much folly prevalent on the subject of positions of companies. Steuben's work has endeavored to fix a plan of alternation; but failed. A simple principle would be to number the companies from right to left, and form the first battalion of 1, 3, 5, 7, 9, and the second of 2, 4, 6, 8, 10. Officers commanding companies or platoons are all on the right of their respective ones.

The eight battalion companies will compose four grand divisions—eight companies or platoons—sixteen subdivisions—thirty-two sections, when sufficiently strong to be so divided, otherwise twenty-four, for the purposes of march. The battalion is likewise divided into right and left wings. When the battalion is on a war establishment, each company will be divided into two equal parts. When the ten companies are with the battalion, they may then be divided into five grand divisions from right to left. This is done to render the firings more exact, and to facilitate deploy movements.

The battalion companies will be numbered from the right to the left 1. 2. 3. 4. 5. 6. 7. 8. The subdivisions will be numbered 1. 2. of each. The sections will be numbered 1. 2. 3. 4. of each. The files of companies will also be numbered 1. 2. 3. 4. &c. the grenadier and light companies will be numbered seperately in the same manner, and with the addition of those distinctions. No alteration is to be made in these appellations whether the battalion be faced to front or rear.

FORMATION *at close order*, is the arrangement of any given number of men in ranks at the distance of one pace, except where there is a fourth, or supernumerary rank, which has three paces. In firing order the ranks are more closely locked in.

When a battalion is formed in close order, the field officers and adjutant are mounted. The commanding officer is the only officer advanced in front for the general purpose of exercise, when the battalion is single; but in the march in line, and during the firings, he is in the rear of the colors. The lieutenant colonel is behind the colors, six paces from the rear rank. The major and adjutant are six paces in the rear of the third and sixth companies. One officer is on the right of the front rank of each company or platoon, and one on the left of the battalion. All these are covered in the rear by their respective serjeants, and the remaining officers and serjeants are in a fourth rank behind their companies. There are no coverers in the centre rank to officers or colors. The colors are placed between the fourth and fifth battalion companies, both in the front rank, and each covered by a non-commissioned officer, or steady man in the rear rank. One serjeant is in the front rank betwixt the colors; he is covered by a second serjeant in the rear rank, and by a third in the supernumerary rank. The sole business of these three serjeants is, when the battalion moves in line, to act as guides, and direct the march according to prescribed instructions. The place of the first of those serjeants, when they do move out, is preserved by a named officer or serjeant, who moves up from the supernumerary rank for that purpose. The pioneers are assembled behind the centre, formed two deep, and nine paces from the third rank. The drummers of the eight battalion companies are assembled in two divisions, six paces behind the third rank of their 2d and 7th companies. The music are three paces behind the pioneers, in a single rank, and at all times, as well as the drummers and pioneers, are formed at loose files only, occupying no more space than is necessary. The staff officers are three paces behind the music.

FORMATION *at open order*, is any open disposition, or arrangement of men by ranks, at straight lines parallel to each other.

When a battalion is directed to take open order, the rear ranks fall back one and two paces, each dressing by the right the instant it arrives on the ground. The officers in the front rank, as also the colors, move out three paces. Those in the rear, together with the music, advance through the intervals left open by the front rank officers, and divide themselves in the following manner: the captains covering the second file from the right, the lieutenants the second file from the left, and the ensigns opposite the centre of their respective companies. The music form between the colors and the front rank. The serjeant coverers move up to the front rank, to fill up the intervals left by the officers. The pioneers fall back to six paces distance behind the centre of the rear rank. The drummers take the same distance behind their divisions. The major moves to the right of the line of officers; the adjutant to the left of the front rank. The staff place themselves on the right of the front rank of the grenadiers. The colonel and lieutenant-colonel dismounted, advance before the colors four and two paces.

FORMERS, round pieces of wood that are fitted to the diameter of the bore of a gun, round which the cartridge paper, parchment, lead, or cotton is rolled before it is sewed.

FORMERS were likewise used among officers and soldiers to reduce their clubs to an uniform shape, before the general introduction of tails.

FORMATION *of guards.* See GUARDS.

FORT, in the military art, a small fortified place, environed on all sides with a ditch, rampart, and parapet. Its use is to secure some high ground, or the passage of a river, or to make good an advantageous post, to defend the lines and quarters of a siege, &c.

Forts are made of different figures and extents, according to the exigency of the service, or the peculiar nature of the ground. Some are fortified with bastions, others with demi-bastions. Some are in form of a square, others of a pentagon. Some again are made in the form of a star, having 5 or 7 angles. A fort differs from a citadel, the last being built to command some town. See CITADEL.

Royal-**FORT**, one whose line of defence is at least 26 toises long.

Triangular **FORTS**, are frequently made with half bastions; but they are very imperfect, because the faces are not seen or defended from any other part. If, instead of being terminated at the angle, they were directed to a point about 20 toises from it, they would be much better, as then they might be defended by that length of the rampart, though but very obliquely. The ditch ought to be from 8 to 10 toises. Sometimes instead of half bastions at the angles, whole ones are placed in the middle of the sides. The gorges of these bastions may be from 20 to 24 toises, when the sides are from 100 to 120; the flanks are perpendicular to the sides, from 10 to 12 toises long; and the capitals from 20 to 24. If the sides happen to be more or less, the parts of the bastions are likewise made more or less in proportion. The ditch round this fort may be 10 or 12 toises wide.

The ramparts and parapets of these sorts of works are commonly made of turf, and the outside of the parapet is fraised; that is, a row of pallisades are placed about the middle of the slope, in an horizontal manner, the points declining rather a little downwards, that the grenades or fireworks thrown upon them may roll down into the ditch; and if the ditch is dry, a row of pallisades should be placed in the middle of it, to prevent the enemy from passing over it unperceived, and to secure the fort from any surprise.

FORT *de campagne*, Fr. a field fortification. See FORTIFICATION.

FORTERESSE, *Fr.* Fortress. Any strong place rendered so by art, or originally so by local advantages, or by means of both nature and art. Places which are strong by nature generally stand upon mountains, precipices, in the middle of a marsh, on the sea-coast, in a lake, or on the banks of some large river. Places which are strong by art, owe their strength to the labor of man, whose ingenuity and perseverance substitute ditches and ramparts where mountains and rivers are wanting.

FORTIFICATION, is the art of fortifying a town, or other place; or of putting it in such a posture of defence, that every one of its parts defends, and is defended by some other parts, by means of ramparts, parapets, ditches, and other outworks; to the end that a small number of men within may be able to defend themselves for a considerable time against the assaults of a numerous army without; so that the enemy, in attacking them, must of necessity suffer great loss.

Fortification may be divided into ancient and modern; offensive, and defensive; regular, and irregular; natural, and artificial, &c.

Ancient FORTIFICATION, at first, consisted of walls or defences made of trunks, and other branches of trees, mixed with earth, for security against the attacks of an enemy. Invention owes its origin to necessity; *fortification* seems to have had fear for its basis; for when man had no other enemy but the wild beasts, the walls of his cottage were his security; but when pride, ambition, and avarice, had possessed the minds of the strong and the daring to commit violences upon their weaker neighbors, either to subject them to new laws, or to plunder their little inheritance, it was natural for the latter to contrive how to defend themselves from such injuries.

Our Aborigines of North America, have left traces of *fortification* in its infancy, of which there are some curious and magnificent remains on the *Miami* river, in the state of Ohio.

There are abundance of Indian villages fenced round by long stakes driven into the ground, with moss or earth to fill the intervals; and this is their security (together with their own vigilance) against the cruelty of the savage neighboring nations

Nor is *fortification* much less ancient than mankind; for Cain, the son of Adam, built a city with a wall round it upon mount Liban, and called it after the name of his son Enoch, the ruins of which, it is said, are to be seen to this day; and the Babylonians, soon after the deluge, built cities and encompassed them with strong walls.

At first people thought themselves safe enough with a single wall, behind which they made use of their darts and arrows with safety: but as other warlike instruments were continually invented to destroy these feeble structures, so on the other hand persons acting on the defensive were obliged to build stronger and stronger to resist the new contrived forces of the desperate assailants.

What improvements they made in strengthening their walls many ages ago, appear from history. The first walls we ever read of, and which were built by Cain, were of brick; and the ancient Grecians, long before Rome was ever thought of, used brick and rubble stone, with which they built a vast wall, joining mount Hymetus to the city of Athens. The Babylonian walls, built by Semiramis, or, as others will have it, by Belus, were 32 feet thick, and 100 feet high, with towers 10 feet higher, built upon them, cemented with bitumen or asphaltus. Those of Jerusalem seem to have come but little short of them, since, in the siege by Titus, all the Roman battering rams, joined with Roman art and courage, could remove but 4 stones out of the tower of Antonia in a whole night's assault.

After *fortification* had arrived at this height it stopped for many ages, 'till the use of gunpowder and guns was found out; and then the round and square towers, which were very good flanks against bows and arrows, became but indifferent ones against the violence of cannon; nor did the battlements any longer offer a hiding place, when the force of one shot both overset the battlement, and destroyed those who sought security from it.

Modern FORTIFICATION, is the way of defence now used, turning the walls into ramparts, and square and round towers into bastions, defended by numerous outworks; all which are made so solid, that they cannot be beat down, but by the continual fire of several batteries of cannon. These bastions at first were but small, their gorges narrow, their flanks and faces short, and at a great distance from each other, as are those now to be seen in the city of Antwerp, built in 1540 by Charles V. emperor of Germany; since which time they have been greatly improved and enlarged, and are now arrived to that degree of strength, that it is almost a received opinion, that the art of fortification is at its height, and almost incapable of being carried to a much greater perfection.

Offensive FORTIFICATION, shews how to besiege and take a fortified place; it further teaches a general how to take all advantages for his troops; the manner of encamping, and method of carrying on either a regular or irregular siege, according as circumstances may direct.

Defensive FORTIFICATION, shews a governor how to make the most of a garrison committed to his care, and to provide all things necessary for its defence.

Regular FORTIFICATION, is that built in a regular polygon, the sides and angles of which are all equal, being commonly a musquet shot from each other, and fortified according to the rules of art.

Irregular FORTIFICATION, on the contrary, is that where the sides and angles are not uniform, equi-distant, or equal; which is owing to the irregularity of the ground, vallies, rivers, hills, and the like.

To FORTIFY *inwards*, is to represent the bastion within the polygon proposed to be fortified; and then that polygon is called the *exterior polygon*, and each of its sides the *exterior side*, terminating at the points of the two nearest bastions.

To FORTIFY *outwards*, is to represent the bastion without the polygon proposed to be fortified, and then the polygon is called the *interior polygon*, and each of its sides th· *interior side*, terminating in the centres of the two nearest bastions.

Elementary FORTIFICATION, by some likewise called the theory of fortification, consists in tracing the plans and profiles of a fortification on paper, with scales and compasses; and examining the systems proposed by different authors, in order to discover their advantages and disadvantages. The elementary part is likewise divided into regular and irregular fortification, which see.

Front FORTIFICATION, any proportion of the body of a place, consisting of two half bastions and a curtain.

Practical FORTIFICATION, consists in forming a project of a fortification, according to the nature of the ground, and other necessary circumstances, to trace it on the ground, and to execute the project, together with all the military buildings, such as magazines, store houses, barracks, bridges, &c.

The names of every part of a FORTIFICATION; and first of lines, which are divided into right lines, and curve lines.

Line of defence, is the distance between the saliant angle of the bastion, and the opposite flank; that is, it is the face produced to the flank. Common experience, together with some of the greatest artists in fortification, unanimously agree, that the *lines of defence* may extend (though not exceed) 150 fathom. Some indeed will affirm, that as a musquet does not carry more than 130 fathom point blank, the angle of the bastion should be no further removed from its opposite flank We agree that a musquet carries no farther point blank; but we are sure it will do execution, and kill, at 180 fathom. The enemy generally makes his breaches near the middle of the face; which if granted, the line of fire from the flank to the breach, scarcely exceeds 130 fathom; besides, the cannon of the flank does less execution upon a short *line of defence* than on a long one.

Line of defence fichant, is a line drawn from the angle of the curtain, to the point of the opposite bastion, which is not to exceed 120 fathom; and from the point of the curtain, and flank, to the face of the opposite bastion, which is to be defended. This line may not improperly be called in good English the *butting flank*, since it partly sees the opposite faces in reverse; and the shot from it, especially near the orillon, strike against the faces. Authors are numerous both for and against the *fichant* and *rasant* lines; we can only set down as a fixed rule, that the more powerful the active quality is, the more the passive must suffer; that in fortification the active quality is the fire, which discovers the assailants (who are the passive) going to attack the face of the opposite bastion; consequently, the more this active quality is augmented, by so much the more must the passive subjects suffer; and from thence we argue for the *fichant flank*, since it augments this active quality, by all the fire of the curtain added to the flank, which is the principal action in the art of defence.

Line of defence rasant, is a line drawn from the point of the bastion along the face, 'till it comes to the curtain, which shews how much of the curtain will clear, or defend the face. This line may very justly in our language be called the *sweeping flank*; because the shot as it were sweeps along the opposite faces. This line, as well as the *fichant*, has many supporters, and as many opponents. In our humble opinion, the *line fichant* is preferable to the *line rasant*.

Line of circumvallation. See SIEGE. See CIRCUMVALLATION.

Line of contravallation. See CONTRAVALLATION.

Line of counter-approach. See APPROACHES.

Capital line, is an imaginary line which divides the work into two equal and similar parts, or a line drawn from the point of the bastion to the point where the two demi-gorges meet, &c.

Line of defence prolonged. In the square, and most polygons of the lesser fortification, you prolong the line of defence; but in the polygons of the greater and meaner, you draw a line from the angle of the opposite shoulder to the angle of the curtain, upon which you raise a perpendicular, which serves for the first line of the flank.

Names of the angles in a FORTIFICATION.

Angle of the centre, in a polygon, is formed by two radii drawn to the extremities of the same side, or from the centre, terminating at the two nearest angles of the figure.

Angle of a bastion, } that which is made
Flanked angle, } by the two faces, being the outermost part of the bastion, most exposed to the enemy's batteries, frequently called the saliant angle, or point of the bastion.

Angle of the polygon, is made by the concourse of two adjacent sides of a polygon, in the centre of the bastion

Angle of the triangle, is half the angle of the polygon.

Angle of the shoulder, }
Angle of the epaule, } is made by the face and flank of the bastion.

Angle of the flank, }
Angle of the curtain } that which is made by, and contained between the curtain and the flank.

Angle of the tenaille, }
Flanking angle, } made by two lines fichant, that is, the face of the two bastions extended till they meet in an angle towards the curtain, and is that which always carries its point towards the work.

Dead-angle. Every angle is so called, that points inwards, or is not well defended

Angle of the ditch, is formed before the centre of the curtain, by the outward line of the ditch.

Angle rentrant, }
Re-entering angle, } is any angle whose point turns inwards, or towards the place; that is, whose legs open towards the field.

Saliant angle, is that which points outwards or whose legs open towards the place.

Angle of the complement of the line of defence, is the angle formed by the intersection of the two complements with each other.

Inward flanking angle, that which is made by the flanking-line and the curtain. See Angle.

Names of the solid works of a Fortification.

Advanced-foss, }
Avant-fossé, } or ditch, made at the foot of the glacis: it is but very seldom made, because it is easily taken, and serves for a trench to the besiegers.

Appareille, is that slope or easy ascent which leads to the platform of the bastion, or to any other work, where the artillery, &c. are brought up and carried down.

Approaches, are a kind of roads or passages sunk in the ground by the besiegers, whereby they approach the place under cover of the fire from the garrison.

Area, the superficial content of a rampart, or other work.

Arrow, is a work placed at the saliant angle of the glacis, and consists of two parapets, each about 40 fathoms long; this work has a communication with the covert-way, of about 24 or 28 feet broad, called a caponniere, with a ditch before it of about 5 or 6 fathom, and a traverse at the entrance, of three fathom thick, and a passage of 6 or 8 feet round it.

Banquette, whether single or double, is a kind of step made on the rampart of a work near the parapet, for the troops to stand upon, in order to fire over the parapet: it is generally 3 feet high when double, and 1½ when single, and about 3 feet broad, and 4½ feet lower than the parapet.

Bastion, is a part of the inner inclosure of a fortification, making an angle towards the field, and consists of 2 faces, 2 flanks, and an opening towards the centre of the place, called the gorge: or it is rather a large mass of earth, usually faced with sods, sometimes with brick, but rarely with stone; having the figure described.

With regard to the first invention of bastions, there are many opinions amongst authors. Some have attributed this invention to Zisca, the Bohemian; others to Achmet Bashaw, who having taken Otranto in the year 1480, fortified it in a particular manner, which is supposed to be the first instance of the use of bastions. Those who wrote on the subject of fortification 200 years ago, seem to suppose, that bastions were a gradual improvement in the ancient method of building, rather than a new thought, that any one person could claim the honor of. It is certain, however, that they were well known soon after the year 1500; for in 1546, Tartalea published *Quesiti & inventioni diverse*, in the 6th book of which he mentions, that whilst he resided at Verona (which must have been many years before) he saw bastions of a prodigious size: some finished, and others building: and there is besides, in the same book, a plan of Turin, which was then fortified with 4 bastions, and seems to have been completed some time before.

The great rule in constructing a bastion is, that every part of it may be seen and defended from some other part. Mere angles are therefore not sufficient, but flanks and faces are likewise necessary. The faces must not be less than 50 fathom, nor more than 65. The longer the flanks are the greater is the advantage which can be derived from them. They must therefore stand at right angles with the line of defence. At the same time the disposition of the flanks makes the principal part of a fortification, as on them the defence chiefly depends; and it is this that has introduced the various kinds of fortifying.

The angle of the bastion must exceed 60°; otherwise it will be too small to give room for the guns, and will either render the line of defence too long, or the flanks too short. It must therefore be either a right angle or some intermediate one between that and 60 degrees.

Full bastions are best calculated for intrenchments, which are thrown up at the gorge, or by means of a cavalier, whose faces are made parallel to those of the bastion at the distance of 15 toises; having its flanks at the distance of 12 toises, and a ditch measuring 5.

Large bastions have the advantage of small ones, for this palpable reason; the bastion being considered the weakest part of the body of a place, is always attacked; when there is room for troops, cannon and mortars, its natural weakness is greatly remedied.

Gorge of a bastion, the interval between the extremity of one flank and that of the next.

Flat bastion. When a bastion upon a right line is so constructed, that its demi-gorges do not form an angle, it is called a flat bastion.

Gorge of a flat bastion, is a right line, which terminates the distance between two flanks.

Solid bastion, *Full bastion*, } A bastion is said to be solid or full, when the level ground within is even with the rampart; that is, when the inside is quite level, the parapet being only more elevated than the rest. Solid bastions have this advantage over others, that they afford earth enough to make a retrenchment, in case the enemy lodge themselves on the top of the bastion, and the besieged are resolved to dispute every inch of ground.

Hollow bastion, *Empty bastion*, } is that where the level ground within is much lower than the rampart, or that part next to the parapet, where the troops are placed to defend the bastion. The disadvantage of these kinds of bastions is, the earth being so low, that when an enemy is once lodged on the rampart, there is no making a retrenchment towards the centre, but what will be under the fire of the besiegers.

Detached bastion, is that which is separated or cut off from the body of the place, and differs from a half moon, whose rampart and parapet are lower, and not so thick as those of the place, having the same proportion with the works of the place. Counter-guards with flanks are sometimes called detached bastions.

Cut bastion, is that whose saliant angle or point is cut off, instead of which it has a re-entering angle, or an angle inwards. It is used, either when the angle would, without such a contrivance, be too acute, or when water, or some other impediment, prevents the bastion from being carried to its full extent.

Composed bastion, is when two sides of the interior polygon are very unequal, which also renders the gorges unequal; it may not improperly be called a *forced bastion*, being as it were forced into that form.

Deformed bastion, is when the irregularity of the lines and angles causes the bastion to appear deformed, or out of shape.

Demi-bastion, is composed of one face only, has but one flank, and a demi-gorge.

Double bastion, is that which is raised on the plane of another bastion, but much higher; leaving 12 or 18 feet between the parapet of the lower, and the foot of the higher; and is sometimes in the nature of a cavalier.

Regular bastion, is that which has its true proportion of faces, flanks, and gorges.

Irregular bastion, is that wherein the above equality of just proportion is omitted.

Barriers, in fortification, a kind of rails to stop the horse or foot from rushing in upon the besieged with violence. In the middle of this kind of defence there is a moveable bar of wood, which opens or shuts at pleasure.

Berm, is a little space or path, of 4 to 8 feet broad, between the ditch and the talus of the parapet; it is to prevent the earth from rolling into the ditch, and serves likewise to pass and repass As it is in some degree advantageous to the enemy, in getting footing, most of the modern engineers reject it.

Bonnet, in fortification, is a sort of work placed before the saliant angle of the ravelin to cover it: it consists of 2 faces, parallel to the ravelin, or perpendicular to those of the lunette. They are generally made 10 fathom broad at the ends with a ditch of the same breadth, the covert-way 6, and the glacis 20 fathom.

Breach, is on opening or gap made in a wall or rampart, with either cannon or mines, sufficiently wide for a body of troops to enter the works, and drive the besieged out of it.

Practical breach, is that where men may mount, and make a lodgment, and should be 15 or 20 feet wide.

Capital of a work, is an imaginary line which divides that work into two equal parts.

Capital of a bastion, a line drawn from the angle of the polygon to the point of the bastion, or from the point of the bastion to the centre of the gorge. These capitals are from 35 to 40 toises in length, from the point of the bastion to the place where the two demi-gorges meet; being the difference between the exterior and the interior radii.

Caponnier is a passage made in a dry ditch from one work to another: when it is made from the curtain of the body of the place to the opposite ravelin, or from the front of a horn or crown-work, it has a parapet on each side, of 6 or 7 feet high, sloping in a glacis of 10 or 12 toises on the outside to the bottom of the ditch; the width within is from 20 to 25 feet, with a banquette on each side: there is a brick wall to support the earth within which only reaches within 1½ foot of the top, to prevent grazing shot from driving the splinters amongst the defendants.

Caponnieres with two parapets may properly be called double; as there are some made with one rampart only, in dry ditches of the ravelin, and in that of its redoubt, towards the saliant angles, and to open towards the body of the place.

Caponnieres, made from the body of the place to the out-works, are sometimes arched over, with loop-holes to fire into the ditch The single ones in the ditch of the ravelin and redoubt are likewise made with arches open towards the place; for by making them in this manner, the guns which defend the ditch before them, can no other way be dismounted than by mines.

Cascanes, in fortification, a kind of cellars made under the capital of a fortification; also subterraneous passages or galleries to discover the enemy's mines.

Casemate, in fortification, is a work made under the rampart, like a cellar or cave with loop-holes to place guns in it.

Cavaliers, are works, raised generally within the body of the place, 10 or 12 feet higher than the rest of the works. Their most common situation is within the bastion, and they are made much in the same form: they are sometimes placed in their gorges, or on the middle of the curtain, and then are in the form of a horse-shoe, only flatter.

The use of cavaliers is, to command all the adjacent works and country round them: they are seldom or never made, but when there is a hill or rising ground which overlooks some of the works.

Centre, the middle point of any work. From the *centre* of a place are drawn the first lines to lay down the form of a *fortification*.

Centre of the bastion, is that point where the two adjacent curtains produced intersect each other.

Citadel, is a kind of fort, or small fortification, of 4, 5, or 6 sides; sometimes joined to towns, &c. Citadels are always built on the most advantageous ground. They are fortified towards the city, and towards the country; being divided from the former by an esplanade, or open place: and serving in one case to overawe the inhabitants; and in the other, not only to hinder the approach of an enemy; but to become a retreat to the garrison, should the town be taken.

Coffers. See Coffers.

Command is when a hill or rising ground overlooks any of the works of a *fortification*, and is within reach of common shot; such a hill is said to command that work. See Command.

Complement of the curtain, is that part of the interior side which forms the demi-gorge.

Complement of the line of defence, is a *horn-work* with a *crown-work* before it. See Crown-work.

Cordon, in fortification, is a round projection made of stone, in a semi-circular form, whose diameter is about 1 foot, and goes quite round the wall, and within 4 feet from the upper part.

The cordon being placed on the top of the revetement of the scarp, is a considerable obstacle to the besiegers, when they attempt to storm a place by applying scaling ladders to the scarp.

Covert-way is a space of five or six toises broad, extending round the counterscarp of the ditch, and covered by a parapet from six to seven feet and a half high, having a banquette: the superior part of this parapet forms a gentle slope towards the country, which terminates at the distance of twenty to twenty five toises; this slope is called the glacis.

Sometimes the covert-way is sunk 2 or 3 feet below the horizon of the field; for, as such works are never made to discover the enemy in their trenches, so this method of lowering the covert-way will give room for the fire of the lower curtain (in works that have one) to scour the esplanade; and the expence of it should be the most material objection against it.

Counter-forts, in fortification, are by some called *buttresses*; they are solids of masonry, built behind walls, and joined to them at 18 feet distance from the centre to centre, in order to strengthen them, especially when they sustain a rampart or terrace.

Counter-guard, in fortification is a work placed before the bastions to cover the opposite flanks from being seen from the covert way. It is likewise made before the ravelins.

When counter-guards are placed before the collateral bastions, they are esteemed of very great use, as the enemy cannot batter them without having first secured the possession of the counter-guards. They were first invented by Pasino, in 1579, and greatly improved by Speckle, in 1589.

Counterscarp, is properly the exterior talus of the ditch, or that slope which terminates its breadth, and is the further side from the body of the place. It is so called from being opposite to the scarp.

Crown-work, in fortification is a kind of work not unlike a crown: it has 2 fronts and 2 branches. The fronts are composed of 2 half bastions and 1 whole one: they are made before the curtain or the bastion, and generally serve to enclose some buildings which cannot be brought within the body of the place, or to cover the town-gates, or else to occupy a spot of ground which might be advantageous to an enemy. They are of such an expence, that they are rarely found in practice. The best use this work can possibly be put to, is to cover 2 joining curtains, when the sides of it will be parallel to the sides of the place, and it should be fortified with the same strength, and in the same manner.

The authors who have written on the subject, have never thought of this useful part; and we often see 2 horn-works put in practice to cover two curtains, where crown-work would do it much che and much better. The crown-work is adopted for the same purposes as the horn work.

Crowned horn-work, is a *horn-work* with a *crown-work* before it. See Crown-work,

Curtain, in fortification, is that part of the body of the place, which joins the flank of one bastion to that of another. The straight curtains have always been preferred to the different designs which have been proposed, of which some have diminished the expence, and (at the same time) the strength of the place, others have somewhat augmented the strength, but greatly diminished its area.

Cuvette, } *Cunette*, } in fortification, is a small ditch from 15 to 20 feet broad, made in the middle of a large dry ditch, serving as a retrenchment to defend the same, or otherwise to let water into it, when it can be had during a siege.

When there is a cunette, there should be a caponniere to flank it.

Defilement, in fortification, is the art of disposing all the works of a fortress in such a manner, that they may be commanded by the body of the place. It also includes the relative disposition of the works, and the ground within cannon shot, so that the one may be discovered, and the other not observed.

Demi-gorge, is half the gorge, or entrance into the bastion, not taken directly from angle to angle, where the bastion joins the curtain, but from the angle of the flank to the centre of the bastion, or rather the angle the two curtains would make were they protracted to meet in the bastion. Mr. Landmann determines it to be the line which is formed by the prolongation of the curtain meeting the oblique radius.

Demi-lune. See Ravelin.

Descents in fortification, are the holes, vaults, and hollow places made by undermining the ground.

Descents into the ditch or fossé, are boyaux or trenches effected by the means of saps in the ground of the counterscarp, under the covert way. They are covered with madriers, or hurdles, well loaded with earth, to secure them against fire. In ditches that are full of water, the descent is made even with the surface of the water; and then the ditch is filled with fagots, fast bound, and covered with earth. In dry ditches the *descent* is carried down to the bottom; after which, traverses are made either as lodgments for the troops, or to cover the miner. When the ditch is full of water, the *descent* must be made over its surface; which is done by securing it with blinds or chandeliers, from being enfiladed, or by directing the course of the descent from the point of enfilade in the best way you can.

Detached bastion. See Bastion.

Detached redoubt. See Redoubt.

Ditch, in fortification, is a large deep trench made round each work, generally from 12 to 22 fathom broad, and 15 to 16 feet deep: the earth dug out of it serves to raise the rampart and parapet. Almost every engineer has a particular depth and breadth for ditches; some are for narrow ones and deep, others for broad ones and shallow; and it is most certain that ditches should be regulated according to the situation. In regard to wet and dry ditches, almost all authors have given it in favor of the latter; and we shall only add, that the best of all are those which can either be filled or kept dry at pleasure.

Wet ditches, which have stagnant waters, are liable to great inconveniences. They are said to be well calculated to prevent sudden surprises and assaults; but we are convinced of the contrary, especially during a hard frost. Some again assert, that they stop all communication between ill-disposed persons in the garrison and the besiegers. Every man with the least experience, must be of a different opinion.

Wet ditches might certainly be so constructed, as to let the surface of the water remain 12 or 15 feet above the level of the adjacent country. In which case they would serve as large reservoirs, and not only contribute to the defence of a fortified place, but enrich the grounds by being occasionally let out. The additional value which the neighboring meadows would bear from these seasonable overflowings, might in some degree compensate for the expence of the fortification. During a siege, these waters, with proper management, must give considerable uneasiness to the enemy that invests the place.

To answer this double purpose, the ditch must be separated into several large basons, which might be filled or emptied at discretion, as often as circumstances would require.

Dry ditches. There are some ditches which may be filled at will; and others which cannot, except by extraordinary means. If they should be intended to answer the purpose of agriculture, aqueducts might be constructed, or the waters poured in through artificial channels. In which case the ditches would not require much depth. The glacis might be raised in such a manner as to serve to dam in the body of water, and to afford a second glacis from whence the besieger might be considerably embarrassed.

Ditches that are lined, ditches whose counterscarp is supported, and kept up by a stone or brick wall.

Ditches that are not lined, whose counterscarp is supported by earth covered with sods. These ditches are not so secure as the former, on account of the breadth which must be given to the talus, and by which an enemy might easily surprise a place.

So that ditches in fortification may be briefly distinguished under three separate heads, viz:

Dry ditches, which from the facility with which they may be repaired, and their capability of containing other works proper for their security, are in most instances preferable to any others.

Wet ditches that are always full of water, and consequently must have bridges of communication which are liable to be destroyed very frequently during a siege.

Wet ditches are subject to many inconveniences, are ill calculated to favor sallies, and have only the solitary advantage of preventing a surprise

The third sort of ditch has all the advantages of the other two kinds; if, as we have just observed, it can be so contrived, as to admit water occasionally into the different basons by means of aqueducts, and be drained, as circumstances may require

Draw-bridge. See BRIDGE.

Embrasures. See EMBRASURE.

Envelope, is a work of earth raised occasionally in the ditch, sometimes like a plain parapet, at others like a small rampart with a parapet to it. Envelopes are generally made before weak places.

Epaulement See EPAULEMENT.

Epaule, or the shoulder of the bastion, the angle made by the union of the face and flank.

Escarp. See SCARP.

Esplanade. See ESPLANADE.

Exterior side of a fortification, is the distance, or imaginary line drawn from one point of the bastion to that of the next.

Faces of the bastion. See BASTION.

Faces, of any work, in fortification, are those parts where the rampart is made, which produce an angle pointing outwards.

Face prolonged, that part of the line of defence rasant, which is terminated by the curtain, and the angle of the shoulder.

Fascine. See FASCINES.

Fausse bray, is a low rampart going quite round the body of the place; its height is about 3 feet above the level ground, and its parapet is about 3 or 4 fathom distant from that of the body of the place. These works are made at a very great expence: their faces are very easily enfiladed, and their flank of course is seen in reverse: the enemy is under cover the minute he becomes master of them; and a great quantity of shells which may be thrown into them, and must of necessity lodge there, will go near to make a breach, or at worst to drive every one out. Hence they are liable to do more harm than good, and contribute no way to the defence of the place. M. Vauban only makes them before the curtains, and as such calls them tenailles

Flanks, in fortification, are, generally speaking, any parts of a work, which defend another work along the outsides of its parapets.

Flank of the bastion, is the part between the face and the curtain; the flank of one bastion serves to defend the ditch before the curtain and face of the opposite bastion.

Flanking, is the same thing in fortification, as defending.

Retired flanks, are those made behind the line which joins the extremity of the face and the curtain, towards the capital of the bastion.

Concave flanks, are those which are made in the arc of a circle.

Direct, or grazing flank, is that which is perpendicular to the opposite face produced, and oblique or fichant, when it makes an acute angle with that face.

Second flank When the face of a bastion produced does not meet the curtain at its extremity, but in some other point, then the part of the curtain between that point and the flank, is called the second flank. The modern engineers have rejected this method of fortifying. See FLANK.

Flèche, a work of two faces, often constructed before the glacis of a fortified place, when threatened with a siege, in order to keep the enemy as long at a distance as possible.

Gallery, is a passage made under ground, leading to the mines: galleries are from 4 1-2 to 5 feet high, and about 3 1-2 or 4 feet broad; supported at top by wooden frames, with boards over them.

Genouilliere, the undermost part of the rampart of a battery, or that part from the platform to the sole of the embrasures.

Glacis, is the part beyond the covert way, to which it serves as a parapet, and terminates towards the field in an easy slope at any required number of fathoms distance. Sometimes double glacis are made parallel to the esplanade, and at the distance of 16, or 20 fathoms.

Some authors think these works never answer the expence; however, M. Vauban was so sensible of their utility, that he never failed to make them when the ground was convenient for it; because, when such works are defended by a skilful governor, they will afford the means of being valiantly supported.

Gorge, of a bastion, is the interval between the extremity of one flank and that of the other.

Gorge, of any work, is that part next to the body of the place, where there is no rampart or parapet; that is, at the counterscarp of the ditch.

Half-moon. (Fr. *Demi-Lune*.) Is an out-work that has two faces which form a saliant angle, the gorge of which resembles a crescent. It owes its original invention to the Dutch, who use it to cover the points of their bastions. This kind of fortification, is, however, defective, because it is weak on its flanks. Half-moons are now called ravelins;

which species of work is constructed in front of the curtain. See RAVELINS.

Gorge of a half moon, the distance between the two flanks, taken on the right of the counterscarp.

Head of a work, its front next the enemy, and farthest from the place.

Horn-work, is composed of a front and 2 branches: the front is made into 2 half bastions and a curtain: this work is of the nature of a crown-work, only smaller, and serves for the same purposes. The use of horn-works in general is to take possession of some rising ground advanced from the fortification; the distance of which determine that of the horn-work; and they are placed either before the curtain, or before the bastions, according to circumstances.

Horse-shoe, is a small round or oval work, with a parapet, generally made in a ditch, or in a marsh.

Insult. A work is said to be *insulted*, when it is attacked suddenly and openly.

Interior side of a fortification, an imaginary line drawn from the centre of one bastion to that of the next, or rather the curtain produced till they meet.

Lodgment. See SIEGE.

Loop-holes, are either square, or oblong holes, made in the wall, to fire through with musquets. They are generally 8 or 9 inches long, 6 or 7 inches wide within, and 2 or 3 feet without; so that every man may fire from them direct in front, or oblique to right or left, according to circumstances.

Lunettes in fortification, are works made on both sides of a ravelin: one of their faces is perpendicular to half or 2-3ds of the faces of the ravelin, and the other nearly so to those of the bastion.

There are likewise lunettes, whose faces are drawn perpendicular to those of the ravelin, within 1-3 part from the saliant angle; whose semi-gorges are only 20 fathoms.

These kind of works make a good defence, and are of no great expence; for as they are so near the ravelin, the communication with it is very easy, and one cannot well be maintained till they are all three taken.

Lunettes, are also works made beyond the second ditch, opposite to the places of arms: they differ from the ravelins only in their situation

Lunettons, are small lunettes.

Merlon, is that part of the breast-work of a battery which is between the embrasures.

Orillon, is a part of the bastion near the shoulder, which serves to cover the retired flank from being seen obliquely: it is sometimes faced with stone, on the shoulder of a casemated bastion, to cover the cannon of the retired flank, and hinder them from being dismounted by the enemy's cannon.

Of all the works in a fortification, there is none more capable of defending the passage of the ditch, and to destroy the miner, wheresoever he enters himself, than the orillon. Experience in the last war has shewn us of what vast advantage it is to have 2 or 3 reserve pieces of cannon, which command the ditch, and the face of the opposite bastion, in such a manner as to destroy the attempts of the miners, and see the breach in reverse. Hence the great advantages of a double flank thus concealed weigh so very much with us, and convince us so entirely of their usefulness, that we affirm no place to be well fortified without the orillon, and that the straight flank is fit for nothing but field works.

The orillon is as old as the bastion, and was first made use of about the year 1480; and we find it frequently mentioned in the works of Pasino and Speckle, first published in 1579

Out-works. See WORKS.

Palisades, in fortification, are a kind of stakes made of strong spars about 9 feet long, fixed 3 deep in the ground, in rows about 6 inches asunder: they are placed in the covert-way, at 3 feet from, and parallel to the parapet of the glacis, to secure it from being surprised.

Parapet, in fortification, is a part of the rampart of a work, 18 to 20 feet broad, and raised 6 or 7 feet above the rest of the rampart: it serves to cover the troops placed there to defend the work against the fire of the enemy.

Parallels. See SIEGE.

Port-cullice, in fortification, is a falling gate or door, like a harrow, hung over the gates of fortified places, and let down to keep out the enemy.

Place is the term commonly used in fortification instead of a fortified town.

Regular place, one whose angles, sides, bastion, and other parts are equal, &c.

Irregular place, one whose sides and angles are unequal, &c.

Place of arms, in fortification, is a part of the covert-way, opposite to the re-entering angle of the counterscarp, projecting outward in an angle. It is generally 20 fathoms from the re-entering angle of the ditch on both sides, and the faces are found by describing a radius of 25 fathoms.

Places of arms. See SIEGE.

Pits, or *ponds*, in fortification, are little holes dug between the higher and lower curtains, to hold water, in order to prevent the passing from the tenailles to the flanks.

Profiles, in fortification, are a representation, of the vertical sections of a work; and serve to shew those dimensions which cannot be described in plans, and are yet necessary in the building of a fortification; they may be very well executed and constructed upon a scale of 30 feet to an inch. By a profile are expressed the several heights, widths, and thicknesses, such as they would appear were the works cut down perpendicularly from the top to the bottom. See PROFILES.

Rampart, is an elevation of earth raised along the faces of any work, 10 or 15 feet high, to cover the inner part of that work against the fire of an enemy: its breadth differs according to the several systems upon which it may be constructed: for De Ville makes them 12 1-2 fathoms, M. Vauban 6, and others 10 fathoms.

Rams-horns, in fortification, are a kind of low work made in the ditch, of a circular arc; they were first invented by Mr. Belidor, and serve instead of tenailles.

Ravelin, in fortification, is a work placed before the curtain to cover it, and prevent the flanks from being discovered sideways, it consists of 2 faces meeting in an outward angle Some ravelins are counter-guarded, which renders them as serviceable as either the cunettes, or tenaillons.

Gorge of the ravelin, is the distance between the two sides or faces towards the place.

Gorges, of all other outworks, are the intervals or spaces which lie between their several wings or sides towards the main ditch See GORGES.

Redans, in fortification, are a sort of indented works, consisting of lines or facings that form sallying or re-entering angles, flanking one another, and are generally used on the sides of a river running through a garrisoned town. They were used before bastions. Sometimes the parapet of the covert-way is carried on in this manner.

Redoubt, is a kind of work placed beyond the glacis, and is of various forms. Its parapet, not being intended to resist cannon, is only 8 or 9 feet thick, with 2 or 3 banquettes. The length of the sides may be from 10 to 20 fathoms.

Redoubt, is also the name of a small work, made sometimes in a bastion, and sometimes in a ravelin, of the same form.

Redoubt, is likewise a square work without any bastions, placed at some distance from a fortification, to guard a pass or to prevent an enemy from approaching that way.

Detached-redoubt, is a kind of work much like a ravelin, with flanks placed beyond the glacis: it is made to occupy some spot of ground which might be advantageous to the besiegers; likewise to oblige the enemy to open their trenches farther off than they would otherwise do. Their distance from the covert-way should not exceed 120 toises, that it may be defended by musquet shot from thence.

Redouts-en-cremaillere, so called from their similitude to a saw; the inside line of the parapet being broken in such a manner, as to resemble the teeth of a saw; whereby this advantage is gained, that a greater fire can be brought to bear upon the defile, than if only a simple face was opposed to it, and consequently the passage is rendered more difficult.

Retrenchment, in fortification, is any work raised to cover a post, and fortify it against an enemy, such as fascines loaded with earth, gabions, sand-bags, &c.

Revetement, in fortification, is a strong wall built on the outside of the rampart and parapet, to support the earth, and prevent its rolling into the ditch. When the revetement of a rampart goes quite up to the top, 4 feet of the upper part is a vertical wall of 3 feet thick, with a square stone at the top of it, projecting about 5 or 6 inches, and a circular one below, or where the slope begins, of 8 or 10 inches diameter. They go quite round the rampart, and the circular projection is called the *cordon*

Rideau, in fortification, is a small elevation of earth, extending lengthways on a plane, and serving to cover a camp, or to give an advantage to a post. They are also convenient for the besiegers of a place, as they serve to secure the workmen in their approaches to the foot of a fortress.

Rideau is also used sometimes for a trench, the earth of which is thrown up on its sides, to serve as a parapet for covering the men.

Sap. See SIEGE

Scarp, is, properly speaking, any thing high and steep, and is used in *fortification* to express the outside of the rampart of any work next to the ditch.

Sillon, in fortification, a work raised in the middle of a ditch to defend it when too broad. This work has no particular construction, but as it runs, forms little bastions, half moons, and redans, which are lower than the rampart of the place, but higher than the covert way. It is not much used at present.

Sillon means literally a furrow. In fortification, it is a work raised.

Swallow's-tail, a kind of out-work, only differing from a single tenaille, in that its sides are not parallel as those of the tenaille, but narrower towards the town than towards the country.

Talus signifies a slope made either on the outside or inside of any work, to prevent the earth's rolling down; it is of various denominations, viz.

Talus of the banquette is that gentle slope from the top of the banquette to the horizontal line.

Interior talus of the parapet, the slope from the top of the parapet to the banquette.

Talus of the top of the parapet, that slope which lessens the height of the parapet towards the berm, by which means the troops firing from the banquette can defend the covert way.

Exterior talus of the parapet, the slope of the parapet from the top to the berm.

Interior talus of the ditch, the slope from the top of the ditch to the bottom, within.

Tenailles are low works made in the ditch before the curtains; of which there are three sorts. The first are the faces of the bastion produced till they mee but much lower; the second have faces, flanks, and a curtain; and the third have only faces and flanks. Their height is about 2 or 3 feet higher than the level ground of the ravelin. Their use is to defend the bottom of the ditch by a grazing fire, as likewise the level ground of the ravelin, and especially the ditch before the redoubt within the ravelin, which cannot be defended from any other quarter so well as from them.

Tenaillons are works made on each side of the ravelin, much like the lunettes; with this difference, that one of the faces in a tenaillon is in the direction of the ravelin; whereas that of the lunette is perpendicular to it

Terre-pleine, in fortification, the horizontal superficies of the rampart, between the interior talus and the banquette. It is on the *terre pleine* that the garrison pass and repass; it is also the passage of the rounds.

Tower bastions are small towers made in the form of bastions; first invented by M. Vauban, and used in his second and third method; with rooms or cellars underneath, to place men and artillery in them. As these towers are almost a solid piece of masonry, they must be attended with great expence, though their resistance can be but little; for it has been found by experience, that the casemates are but of little use, because as soon as they have fired once or twice, the smoke will oblige the defenders to leave them, notwithstanding the smoke holes: hence it may be concluded, that the strength of these tower bastions does by no means answer their expences; and that, if small bastions were made instead of them, without casemates, they would be much better, and less expensive.

Traditore, in fortification, signifies the concealed or hidden guns in a fortification, behind the reverse of the orillon.

Traverse, in fortification, is a parapet made across the covert way, opposite to the saliant angles of the works, and near the places of arms, to prevent enfilades; they are 18 or 20 feet thick, and as high as the ridge of the glacis. There are also traverses made in the caponniers, but then they are called *tambours*.

Traverses are likewise made within other works, when there are any hills or rising grounds from whence the interior parts of these works may be observed. Traverses that are made to cover the entrances of redoubts in the field, need not be above 8 or 10 feet thick.

Trous-de-loup, or wolf holes, round holes made about 5 or 6 feet deep, with a stake in the middle: they are generally dug round a field redoubt, to obstruct the enemy's approach; circular at top, and about 4 1-2 feet diameter; pointed at the bottom like an inverted cone. Two or three rows of them are dug chequerwise, about 6 paces from the edge of the ditch, viz. two rows of holes exactly opposite to each other, and a third row in the middle, covering the intervals.

Wicket, a small door in the gate of a fortified place, at which a man on foot may go in, and which may be opened though the gate itself be kept shut.

Works. All the fortifications about a place, are called the *works* of a place.

Out-works. All detached *works* in a fortification are so called. See *Dehors*.

Zig-Zag. See SIEGE.

The principal maxims of fortification, are these, viz. 1. That every part of the works be seen and defended by other parts, so that an enemy cannot lodge any where without being exposed to the fire of the place.

2. A fortress should command all places round it: and therefore all the out works should be lower than the body of the place

3. The works farthest from the centre should always be open to those that are nearer.

4. The defence of every part should always be within the reach of musquet shot, that is, from 120 to 150 fathoms, so as to be defended both by ordnance and small fire arms; for if it be only defended by cannon, the enemy may dismount them by the superiority of their's, and then the defence will be destroyed at once; whereas, if a work is likewise defended by small arms, if the one be destroyed, the other will still subsist.

5. All the defences should be as nearly direct as possible; for it has been found by experience, that the soldiers are too apt to fire directly before them, without troubling themselves whether they do execution or not.

6. A fortification should be equally strong on all sides; otherwise the enemy will attack it in the weakest part, whereby its strength will become useless.

7. The more acute the angle at the centre is, the stronger will be the place.

8. In great places, dry ditches are preferable to those filled with water, because sallies, retreats, succors, &c. are necessary; but, in small fortresses, wet ditches, that can be drained, are the best, as standing in need of no sallies.

Field FORTIFICATION is the art of constructing all kinds of temporary works in the field, such as redoubts, field forts, star forts, triangular and square forts, heads of bridges, and various sorts of lines, &c. An army intrenched, or fortified in the field, produces, in many respects, the same effect as a fortress; for it covers a country, supplies the want of numbers, stops a superior enemy, or at least obliges him to engage at a disadvantage.

The knowlege of a field engineer being founded on the principles of *fortification*, it must be allowed, that the art of fortifying is as necessary to an army in the field, as in fortified places; and though the maxims are nearly the same in both, yet the manner of applying and executing them with judgment, is very different.

A project of fortification is commonly the result of much reflexion; but in the field it is quite otherwise: no regard is to be had to the solidity of the works; every thing must be determined on the spot; the works are to be traced out directly, and regulated by the time and number of workmen, depending on no other materials than what are at hand, and having no other tools than the spade, shovel, pick-axe, and hatchet. It is therefore in the field, more than any where else that an engineer should be ready, and know how to seize all advantages at first sight, to be fertile in expedients, inexhaustible in inventions and indefatigably active.

Quantity and quality of the materials which are required in the construction of field-fortification.

1. Every common fascine made use of in the construction of field works or fortifications, should be 10 feet long and 1 foot thick. A fascine is raised by means of 6 pickets, which are driven obliquely into the earth, so that 2 together form the shape of a cross. These pickets are tied with willows, or birch twigs. It is upon supporters or tressels of this kind, that fascines are made, which are properly fagots bound together with rods, at intervals of 1 foot each in breadth. Six men are required to complete each fascine; viz. 2 to cut the branches, 2 to gather them up, and 2 to bind the fascines. Six men may with great ease, make 12 fascines in an hour. The smaller sort of willows, or birch twigs, are best calculated for this work. The fascines are fastened to the parapet, which would otherwise crumble and fall down. A redoubt, constructed *en crémaillere*, must have fascines 8 feet long.

2. There must be 5 pickets for each fascine, and each picket must be 3 or 4 feet long, an inch and a half thick, and sharp at one end; they serve to fasten the fascines to the parapet.

3. When you cannot procure wood for the fascines, the parapet must be covered or clothed with pieces of turf, 4 inches thick, and a foot and a half square; these are fastened to the parapet with 4 small pickets 8 inches long.

4. The fraises, or pointed stakes, must be 8 feet long, 5 inches thick, and be sharp at the top. The beams upon which they are laid, must be 12 feet long and 6 inches thick. These beams are spread horizontally along the parapet, and fraises are fixed to them, with nails 7 inches long; after which the beams are covered with earth. Two men will make 12 fraises in an hour.

5. The palisades, by which the ditch or fossé of a work is fortified, must be 9 or 10 feet long, and 6 inches thick; they must, likewise, be sharpened at the end. If you cannot procure them of these dimensions, you must use smaller ones; in which case you will have the precaution to mix a few large stakes.

6. The pickets, which are fixed in *trous-de-loup* or wolf-holes, must be 6 feet long, 4 inches thick, and sharp at the top.

7. The beams belonging to a *chevaux-de-frize*, must be 12 feet long, and 6 inches broad. The spokes which are laid across, must be 7 feet long, 4 inches thick, and placed at the distance of 6 inches from each other. These *chevaux-de-frizes* are made use of to block up the entrances into redoubts, to close passages or gates, and sometimes they serve to obstruct the fossé.

8. Gabions are constructed of various sizes. Those which are intended for field works, must be 3 or 4 feet high, and contain 2 or 3 feet in diameter. These gabions are made by means of long stakes, 3 or 4 feet long, which are placed so as to form a circle, which is 2 or 3 feet in diameter. The pickets must be covered and bound in the same manner as hurdles are. Gabions are chiefly of use in embrasures. They are fixed close to each other, and are afterwards filled with earth. There are also gabions of one foot, with 12 inches diameter at the top, and 9 at the bottom The bank of the parapet is lined with gabions of this construction, behind which troops may be stationed, so as to fire under cover through the intervals. A quantity of large wooden mallets, rammers, hatchets, axes, and grappling irons, is required for this work.

Names of all works used in field FORTIFICATION.

Bridge heads, or *têtes de pont*, are made of various figures and sizes, sometimes like a redan or ravelin, with or without flanks, sometimes like a horn or crown work, according to the situation of the ground, or to the importance of its defence. Their construction depends on various circumstances; for, should the river be so narrow, that the work may be flanked from the other side, a single redan is sufficient; but when the river is so broad, that the saliant angle cannot be well defended across the river, flanks must be added to the redan; but should a river be 100 toises, or more across, half a square may be made, whose diagonal is the river side; and where the river is from 3 to 500 toises broad, a horn, or crown-work should be made. All the different sorts of *heads of bridges*, are to be esteemed as good works against a sudden onset only, and their use is almost momentary, as they sometimes serve but for a few days only, and at most during a campaign.

Dams are generally made of earth, but sometimes of other materials, as occasion may require: their use is to confine water.

Flèche a work consisting of two faces, terminating in a saliant angle of 90°, the faces are generally 75, or 80 feet long, the parapet 6 feet thick, and the ditch 7 feet broad.

Forts, in field fortification, are of various sorts, viz

Field forts may be divided into two kinds: the one defending itself on all sides, as being entirely surrounded; the other, bordering on a river, &c. remain open at the gorge. They have the advantage of redoubts, in being flanked, and the disadvantage in containing less within, in proportion to their extent.

Star forts are so called, because they resemble that figure. They were commonly made of 4 angles, sometimes of 5, and very rarely of 6; but we find them now made of 7 and 8 angles. Let their figure however, be what it will, their angles should be equal; if formed of equilateral triangles, so much the better; for then the flanking angle being 120°, the fires cross better and nearer; and as the 2 flanks are on the same line, the space not defended before the saliant angle, is reduced to a parallelogram, whose smallest side is equal to the gorge.

Bastioned forts differ in nothing from that of places, except that the figure is less, and the attack supposed of another kind. It is reckoned sufficient to flank them with half bastions.

Triangular forts. As these kind of *forts* contain less in proportion than any other, they are consequently used as seldom as possible.

Square forts are in many respects preferable to the triangular ones. See FORT.

Lines, in field fortification, are of several sorts, viz. the front of a fortification, or any other field work, which with regard to the defence, is a collection of lines, contrived so as reciprocally to flank each other.

Lines of intrenchment are made to cover an army; or a place indifferently fortified, and which sometimes contains the principal magazine of an army; or to cover a considerable extent of ground, to prevent an enemy from entering into the country to raise contributions, &c.

Lines, of whatever form or shape, should be every where equally strong, and alike guarded.

Maxims. 1st. To inclose with the work as much ground as possible, having regard to circumstances. This attention chiefly concerns redoubts and small works.

2d. If there are several works near each other, their lines of defence should be so directed, as to defend each other without being annoyed by their own fire.

3d. Not to depend on the defence of small arms, but where they can fire at right angles; as they too generally fire without aim, and directly before them.

4th. Not to have recourse to the 2d flank or fire of the curtain, but when there is an absolute necessity.

5th. That the flanking angle be always a right one, or at least obtuse, but never to exceed 100°, if possible, there being no fear here, as in a fortification, of the flank being too much exposed. Besides, it is not necessary to graze the faces, or even to fire obliquely on them; since there is no danger of being exposed to the defence of a breach, or lodgment of the miners. The only thing to apprehend, is a sudden attack.

6th. That the flanking parts be sufficiently extended, so that the interior of their parapets at least may rake the whole breadth of the opposite ditch.

7th. Never to make an advanced ditch in dry ground, unless it can be enfiladed throughout, and under a proper angle be defended by the work which it covers, or surrounds.

8th. Not to allow more than from 60 to 80 toises for the lines of defence, when they proceed from two flanks separated by two branches, forming a saliant angle, or when not made to cross, though produced.

9th. That the parts most extended, and consequently the weakest in themselves, be as much defended as possible, and have at least the fire of two flanks, besides their own direct fire.

Redans are a sort of indented works, consisting of lines and faces, that form saliant and re-entering angles, flanking one another. Lines are often constructed with redans: their saliant angles are generally from 50 to 70°.

Indented redans are when the two faces are indented, in that case the faces of each indented angle is 8 1-2 feet only.

Tambour, a kind of work formed of palisades, 10 feet long, and 6 inches thick, planted close together, and driven 2 or 3 feet into the ground; so that when finished it has the appearance of a square redoubt cut in two. Loop-holes are made 6 feet from the ground, and 3 feet asunder, for the soldiers to fire through, who are placed on scaffolds 2 feet high. They have often been used by the French with great advantage.

Têtes-de-pont. See *Bridge-heads*.

Trous-de-loup are holes dug in the ground, circular at top, about 4 1-2 feet diameter, and 6 feet deep, pointed at bottom, like an inverted cone, or sugar loaf. A stake six feet long is fixed in their centre, driven 2 feet into the ground, and made sharp at top. Two or three rows of them are dug chequerwise, about 6 paces from the ditch of a field-work. They prevent the approach of horse, &c.

PERPENDICULAR FORTIFICATION. The principles of Vauban for direct or horizontal works, are the most perfect of all others: indeed all the masters of the art in modern times, who have introduced any thing new, allow that their works are only improvements of Vauban. The writings of Cormontagne are the most approved of the late writers on military defence. The principles of elevated works to cover naval roads and harbors, is among the improvements on Vauban; the works at Cherbourg, in France, and at fort Columbus, New York harbour, are very happy examples of the power of such works, as well as of the talents of the Engineers who erected them. Those at New York were by Col. Williams of the United States engineer corps.

Subterraneous FORTIFICATION.

These consist of the different galleries and branches which lead to mines, to the chambers belonging to them, or to fougasses, and which are required whenever it is found necessary to explode for the purposes of attack or defence. A subterraneous fortification may be of a permanent or temporary construction, offensive or defensive nature. Whenever this sort of work is adopted to strengthen and secure a fortified place, it is generally built of stone or brick, and made sufficiently solid to last a long time; it is then called permanent and defensive. Any place which is put in a state to withstand the subterraneous attacks of a besieging enemy, is said to be countermined.

When the besieger wishes to make an impression on a fortification of this sort, he must first construct galleries which he covers with wood, &c. He then practices offensive and temporary fortifications of the subterraneous sort. These works are well calculated to aid him in securing a lodgment for his subterraneous artillery, and in establishing chambers, fougasses, &c.

With respect to fortification in general, different authors recommend different methods; but the principal are those of Pagan, Blondel, Vauban, Coehorn, Belidor, Scheiter, and Muller.

It must, however, be constantly recollected by every engineer, that his views are not to be confined to the mere art of fortification. He ought further to know the use which different generals, in different periods, have made of natural strength and position; without an attention of this sort, he will fall very short of that extensive knowlege, which every military man, who aims at military fame, must be ambitious of acquiring. Chains of mountains, and volumes of water, together with the influence which different climates have upon the latter element, should always constitute a part of the natural system that ought to form an essential portion of his application. Hydrography will likewise assist him in this pursuit. To enlarge upon this important branch of geography, and to point out the great means which it affords of natural defence and offence in fortification, would be to exceed the limits of our present undertaking. We shall, therefore, refer our military readers to Belair's *Elemens de Fortification*, and content ourselves with submitting a short account of the different authors who have either given original systems, or have greatly improved those that were already known. Independent of whom, may be named the following writers, who have likewise contributed to the general knowlege of fortification, viz. Errard Deville, Belidor, D'Alembert, Cormontagne, Folard, Clairac, Muller, Robins, LeBlond, Didier, Marshal Saxe, Cugnot, Tielke, Landsbergen, Trincano, Fallios, Rosard, Belair, &c.

FORTIFICATION; according to the method of Pagan, consists in three different sorts, viz. the great, the mean, and little, whose principal dimensions are contained in the following

TABLE.

	The great FORTIFICATION.		The mean.		The little.	
	for squares	for all other polygons	for squares	for all other polygons	for squares	for all other polygons
Exterior side . . .	200	[illegible]	180	180	160	160
The perpendicular	27	30	24	30	21	30
The face . . .	60	60	55	55	45	50
The flank .	22	24 2	19 1	24 [illegible]	18 3	23 2
The curtain .	73 2	70 5	63 4	[illegible] 4	63 5	50 4
The line of defence	141 4	141 2	126 1	126 5	115 5	112 3

Blondel fortifies within the given polygon: he establishes two sorts of fortification; the great one, whose exterior side is 200 toises, and the lesser one 170; because he will not have the line of defence exceed 140 toises, which is the greatest musquet shot, nor less than 120 toises, not to increase the number of bastions. He begins by the diminishing angle, which may be found by taking 90 degrees from the angle of the polygon, and by adding 15 degrees to the third of the remainder.

Vauban's method is divided into little, mean, and great: the little is chiefly used in the construction of citadels; the mean, in that of all sorts of towns; and the great, in particular cases only.

TABLE.

	Forts.						Little.				Mean.		Great.	
Side of Polygon	80	90	100	110	120	130	140	150	160	170	180	190	200	260
Length of perpendicular	10	11	12½	14	15	16	20	21	23	25	30	31	25	22
Faces of Bastions	22	25	28	30	33	35	40	42	45	47	50	53	55	60
Capital of Ravelins	25	28	30	35	38	40	45	50	50	52	55	55	60	50

In the first vertical column are the numbers expressing the lengths of the exterior sides from 80 to 260.

In the second, the perpendiculars answering to these sides.

In the third, the lengths of the faces of the bastions; and in the fourth, the lengths of the capitals of the ravelins.

Belidor's method is divided also into little, mean, and great: and in all three the exterior side is 200 toises; the perpendicular of the little is 50, that of the mean 55, and the great 40: the faces of the first 70, the second 70, and the third 55 toises.

Scheiter's method is divided into the great, mean, and small sort. The exterior side of the polygon for the great sort is 200 toises, the mean sort 180, and the small 160 The line of defence in the first is 140 toises, the second 130, and the third 120. This line is always rasant. All the other lines are fixed at the same length for all polygons, whose structure chiefly depends upon the knowlege of the exterior side, of the capital, or of the flanked angle, the rest being easily finished.—See the TABLE.

TABLE *of capitals and flanked Angles.*

Polygons.	IV	V	VI	VII	VIII	IX	X	XI	XII
The flanked angles in the 3 sorts of fortification.	deg. 64	76	84	90	95	97	99	101	103
Capital for the great sort.	toises 46	49	51	52	53	54½	56½	58	59
Capital for the mean sort.	42	44½	46½	48½	50	51	52½	54	54
Capital for the small sort.	39	41½	42½	45	46	47½	48½	50	50½

Errard, of Bois le-Duc, who was employed by Henry IV. and was the first that laid down rules in France respecting the best method of fortifying a place so as to cover its flank, constructs that flank perpendicular to the face of the bastion; but by endeavoring to cover it effectually, he makes the gorges too exiguous, the embrasures too oblique, and leaves the ditch almost defenceless.

The Chevalier de Ville, who succeeded Errard, draws the flank line perpendicular to the curtain; but here again the embrasures are too oblique, especially in the polygons, and the ditch is necessarily ill guarded This engineer's method of fortifying is stiled by most authors, the *French method.* His favorite maxim is to make the flank angle straight, and the flank equal to the demigorge.

Count Pagan makes the flank perpendicular to the line of defence, which method seems to agree perfectly with this maxim, because by that means the flank so raised covers as much as possible the face of the opposite bastion; but notwithstanding this apparent advantage the flank becomes too small and is too much exposed to the enemy's batteries. This engineer acquired great reputation during the several sieges which he assisted in conducting under Louis XIII His system has been improved upon by *Alain Marrison Mallet*, and his construction in fortification is to this day esteemed the most perfect. It differs very little from Marshal Vauban's first system. Count Pagan has pointed out the method of building casemates in a manner peculiar to himself.

Marshal Vauban has judiciously steered between these different methods. He has drawn his flank in such a manner, that it does not stand too much exposed, nor does its collateral line of defence extend too far from the direct line of defence. He has effected this by lengthening out his flank and giving it a circular form.

It cannot be disputed but that large and extensive flanks and demi-gorges are superior to narrow and confined ones. The more capacious the flank is, the better calculated will it prove for the disposition of a formidable train of artillery. From this conviction many writers in their proposed systems of fortification, have added a second flank, in order to augment the line of defence; but they did not foresee, that this second flank is not only incapable of covering the face of the opposed bastion, except in a very oblique and insecure direction, but that the right flank, or the flank of the bastion, is thereby, more exposed to the enemy's batteries, which, it must be acknowleged, is a great fault.

The prevailing system of the present day is to make the flanks of the bastion as wide as possible, without having recourse to a second flank, unless it be absolutely necessary. Those gorges are likewise best which are most capacious, because they afford space and ground in the bastion for the construction of intrenchments within, should the enemy have effected a practicable breach.

All parts of a fortification which stand exposed to the immediate attacks of a besieging enemy, must be strong enough to bear the boldest attempts, and the most vigorous impressions. This is a self-evident maxim, because it must be manifest to the most common understanding, that works are erected round a place for the specific purpose of preventing an enemy from getting possession of it. It consequently follows, that flanked angles are extremely defective when they are too acute, since their points may be easily flanked and destroyed by the besieger's cannon.

The Dutch construct at sixty degrees; but according to Vauban's method, no work should be under seventy-five degrees, unless circumstances and situation should particularly require it

A place to be in a state of defence, should be equally strong in all its relative directions; for the enemy would of course make the weak part his object of attack, and finally succeed in getting possession of the town. The body of the place must have a command towards the country, and no quarter in the outward vicinity of it must overlook, or command either the place itself, or its outworks. Those works which are nearest to the centre of the place, must have a greater elevation than the more distant ones.

The first regular system of fortification which appeared and was adopted in France, owed its origin to Errard of Bois-le-Duc, whom we have just mentioned. His method, however, has been uniformly rejected by able engineers; and if we may give credit to the report of Ozanan, Errard himself never carried his own system into practice.

Next to Errard of Bois-le-Duc, came the Chevalier Antoine de Ville, who was engineer under Louis XIII. and published an excellent treatise upon fortification. His method is stiled by most authors, the *French method*. Others call it the *Compound System*, or *Systeme à trait Composé*, because it united the Italian and Spanish methods. He was, indeed, by no means an advocate for new systems; for he generally observed, that any new method, or invention was extremely easy, so long as it was confined to the mere alteration of something in the measure, or in the disposition of those parts of fortification which have been discussed by other authors.

The Count de Pagan followed after, and had the good fortune to propose a system which entirely superseded the other two. We have already mentioned the principal feature, in his method.

Marshal Vauban, whose reputation rose upon the manifest superiority which his skill gave him over all others that had written upon fortification, likewise proposed three methods, with considerable improvements: *viz.* The *great*, the *mean*, and the *little*.

The great method, according to Vauban, contains on its exterior side from 200 to 230, or 240 toises. This extent is not uniformly the same throughout all the sides of a place, but is confined to that side which lies along the banks of a river, where he uniformly erects considerable outworks.

Vauban made use of his second method in fortifying Befort and Landau. On account of the bad local situation of Befort, and the impossibility of fortifying it with common bastions that would not be exposed to an enfilade in almost every direction, in spite of the traverses or *rechutes* which might be made: he invented arched bastions that were bomb proof, which he called *tours bastionnées*, or *towers with bastions* These arched bastions are covered by counter-guards, the height of whose parapet almost equals the elevation of the towers themselves. Although strictly speaking, both these places are irregularly fortified, nevertheless a method of regular defence may be established from the construction of their works.

Vauban's third system grows out of the second; and for that reason it is called *ordre renforcé*, the *reinforced order or method*. It was adopted in the fortifications of New Brisac. Vauban left nothing untried to bring this system to perfection, and he had the ingenuity to execute his plan at a less expence, than it would otherwise have been effected, by means of half revetements which he threw up in the outward works called the dehors.

This system, however, (ingenious and unrivalled as it certainly is,) has not escaped the censure of some writers. It must nevertheless be acknowleged, that their remarks are either founded in envy, or that they proceed from ignorance.

There are other systems of fortification which have been proposed by the writers of other countries besides France. We shall give a brief detail of them, and leave the inquisitive to go more at length into the nature of their methods, by referring them to the different treatises.

The Italians have furnished several authors who have written variously on the subject of fortification. The method proposed by Sardis has been generally esteemed the best.

The Spaniards in their methods of fortifying, never adopt that which adds a second flank. The obtuse flanked angle is not looked upon by their best engineers as a defective system in fortification.

Both the Italians and the Spaniards speak frequently of the *ordre renforcé*, which was originally invented to lessen the number of bastions in a great town or fortified place, and to render consequently the line of defence equal to the range of musquetry.

The Chevalier St. Julien, a very able engineer, has published a method, by which, he asserts, that works may be constructed not only at a less expence than others require, but in a manner that must render his defence or attack more formidable. He has likewise invented a new method for the defence of small places, which is preferable to the first, although it is not without faults. According to his system, the reach of the musquet is taken from the centre of the curtain. To this end he directs, that a covert lodgment, 7 feet high, and 10 toises wide, be constructed from that spot to the gorge of the half moon or ravelin. Cannon is disposed along the faces, and a gallery is erected for the musquetry, which likewise serves as a passage to the ravelin.

Francis Marchi, a gentleman of Bologna, in his folio edition, has furnished us with upwards of 160 different methods of constructing fortifications.

The Dutch uniformly pursue the system published by Marollois.

Bombelle has likewise established three sorts of fortification, the great royal, *grand royal;* the mean; and the little royal, *petit royal*. His method agrees with the sound maxims of good fortification much more than any of the preceding ones.

Blondel has published a system of fortification, which he divides into two principal heads; the *great*, whose exterior side contains 200 toises; and the *little*, where the side does not exceed 170 toises. His reason is, because he objects to the line of defence having more than 140 toises, which is the furthest reach of musquetry, or less than 120 toises, to prevent an unnecessary increase of bastions. The principles of Blondel's system resemble, in a great degree, those upon which Pagan's is founded, and chiefly consist in methods of fortifying inward posts. The invention has certainly great merit, but its adoption must prove expensive in all its practical branches. It must, moreover, be manifest, that the four long batteries which are supported by flanks of his construction, must serve as so many scaling ladders, or steps to the besiegers, the instant they have effected a breach by cannon shot, or shells.

In 1689, a work was published, entitled:

Nouvelle maniere de fortifier les places, tirée de methodes du Chevalier de Ville, du Comte de Pagan, et de M. de Vauban; avec des remarques sur l'ordre renforcé, sur les desseins du Capitaine Marchy, et sur ceux de M. Blondel. This work is full of strong reasoning, from the result of which the author has formed a new method, containing indeed, nothing original, but giving references to what has already appeared, and disposing the different parts in so judicious a manner, as to shew how a place may be rendered stronger, and be subject at the same time to a less expence. This writer divides fortification into three parts, the great, the mean, and the little.

There is a second and a third method proposed anonymously, and containing mere simple designs. That method in which a modern author gives it the preference over the system of New Brisac, contains little useful information, and contributes less to the real art of fortifying places.

Donato Rosetti, a Canon belonging to Livournia, professor of mathematics in the academy at Piedmont, and mathematician to the Duke of Savoy, has written upon a method of constructing works in what he calls *fortification à rebours*, or fortification in reverse; so called not only because the re-entering angle of the counterscarp is opposite to the flanked angle; but because, in his idea, it will be necessary to attack it from the reverse side of other works. His system is very simple, and does not require a sacrifice of much money, or stand in need of many men to defend the works: although he can, on his side, pour as much fire upon the enemy, as could be furnished by more complicated methods.

Antonio de Herbart, major of artillery, in the Duke of Wurtemberg's service, in 1735, published a treatise on fortifications with square angles, which he calls *angular polygons*.

Monsieur de Montalembert has lately endeavored to bring arches, which are so much condemned by the Chevalier de Ville, into repute. He treats the subject in a manner, and upon principles so similar to those proposed by Antonio de Herbart, that it is almost impossible to separate the two systems. M. de Montalembert asserts, that the science of fortification, (as it is established and taught at present) can only be valued by the public on account of its illusion. He looks upon the use of bastions, as the effect of prejudice; he rejects them wholly, and substitutes in their room, a front of *angular tenailles*, *polygons with small wings*, *and angular polygons*. The engineers of the present day assert with confidence, that the chief security to be derived in works that are supported by bastions, must depend upon cross and reverse firing directed against the enemy's lodgments on the glacis. Large half-moons are made, not only for the purpose of covering the curtains and the flanks of bastions, but principally to obtain a reverse firing, which effectually prevents the enemy from maintaining his ground on the glacis of a bastion, before he has taken the two collateral half-moons.

M. Minno, Baron of Coehorn, who was general of artillery in the Dutch service, lieutenant-general of infantry, director-general of all the fortified places belonging to the united provinces, and governor of Flanders and all the fortresses that lay along the Scheldt, has been justly esteemed for his extensive knowlege in the art of fortifying places. He was cotemporary with Vauban. This intelligent and sagacious officer being thoroughly convinced, that, however expensively the rampart of a town may be constructed, it could not long sustain the shock of heavy ordnance, invented three different systems, by which he throws so many obstacles in the way of a besieging enemy, that although the place be not in reality rendered impregnable, it is nevertheless so far secured as to make its conquest a business of considerable hazard and expence. We must however acknowlege, that the three methods which have been pointed out by this Dutch general, can only suit places and grounds that are nearly on a level with the surface of the water; that is to say of 3, 4, or 5 feet; which circumstance plainly indicates, that his attention has been chiefly directed to the soil and ground of Holland; so that his instructions are peculiarly applicable to low and aquatic situations. There is much skill discovered in his manner of treating the subject, and considerable ingenuity in the treatise he has published, which certainly contains several improvements that are exclusively his own. It would be impossible to force a passage, or to penetrate into any of his works, without being exposed on all sides, to the fire of the besieged, who are under cover, and from whose discharge of ordnance and musquetry, it is scarcely possible for an assailing enemy to secure himself

Scheiter, a German writer, describes two kinds of fortifications, the *great* or the *superior*, and the *small* or the *inferior species*. It has been erroneously and unjustly stated, that the celebrated Vauban only copied after Scheiter, at New Brisac.

Every man of the least knowlege or penetration must see, that the whole system of that illustrious engineer differs essentially from the author we have quoted.

The defects which are manifest in all these different systems shew the superiority which exists, to this day, in all the fortifications that have been constructed by Vauban.

An anonymous writer in the Sardinian service, proposes two new methods of fortification in a work entituled *Science de la Guerre*, which was published at Turin, in 1744 After having discussed, at considerable length, the art of fortification in general, its utility, the different sciences which must be acquired towards obtaining any degree of perfection in that art, the various systems in it, regular and irregular, and the construction of palisades, gates, mines, casemates, magazines, &c. &c. he concludes with this extraordinary sentence: "It is not my intention to propose any alteration in the general system, but merely to suggest, that the style be rendered more intelligible." It must be noticed, that this Italian writer in his preface, frankly confesses his deficiency in the French language. We shall however pass over what he says relative to the approbation which his proposed systems, or rather his explanation of methods already known has met with from scientific men, and give his own observations concerning the improvements that might be made. His words are—

"The first method which I propose, consists of a new figure and position that should be given to exterior works in fortification. Having constructed the body of the place after Vauban's manner, my next object is to erect counter guards with bastions at the head, and flanks upon the wings. I have been induced to adopt this species of work, in order to remedy the inconveniences and the dangers which invariably attend works erected at the foot of the glacis. These works contribute very little to the security of the place, and can only be defended b cannon, which eventually do more harm to the garrison than to the besieging enemy, since they serve as an epaulement to the battery, which the latter will naturally erect the instant he obtains footing in that quarter. This was proved during the siege of Turin, where in a very short space of time the French carried the bonnets and fleches, and made use of them for the purpose of bringing up their artillery.

By means of the small bastions which I have proposed, and which must be pushed forward into the country, the enemy's approaches are necessarily checked, the saliant angle of the counter-guard is covered, the ditch is completely flanked, and the garrison are impressed with confidence, because the artillery and the troops can always be called in, in cases of exigency. They moreover equal the enemy in the fire which they can furnish, and the whole body of the place is covered by them.

I construct the bastions and flanks out of the sides of the counter-guard, which are detached by means of a ditch 4 toises wide. This ditch is covered above by vaults made of brick or timber, and by boards well supported underneath by strong stakes, the whole being strengthened and rendered bomb-proof with earth 3 or 4 feet thick. This earth keeps the upper plan of the bastion compact, and is sufficient to form a parapet to the counter-guard when the bastion is destroyed. If the vaults should be blown up by mines, and the besiegers set fire to the beams that supported them, a fresh work will present itself, together with a ditch which they had not foreseen or expected, and which they must cross before any further impression can be made.

This sort of subterraneous fortification is extremely advantageous, and may be converted to various purposes. It serves for casemates and galleries to the mines, which I would construct along the whole extent of the faces belonging to these bastions; a communication with them is kept up by means of the galleries attached to the counter-guard. These galleries must be blocked up the instant the bastion is demolished. The flanks of the side will be built after the same method, with a ditch as wide as the one dug in front of the bastion, and which, according to circumstances, may be uncovered, like that already described. The flanks will be of a round figure, in order to avoid the projection of any angles towards the body of the place, which would be the case, should the work be carried; for the enemy availing himself of the earth in front of the walls, and throwing it up, would derive considerable advantage from these angles.

The principal advantage to be obtained from my system arises out of the double defence which it affords to the saliant angles of the bastions, by covering a part of the *demi-lunes mitrées*, or mitred half-moons (which are their chief protection,) and by these means concealing the body of the place from any outward command, or eminence. This cover or defence cannot, in fact, be taken, before the enemy has got complete possession of the outworks.

I have spoken of these sorts of fortification in the chapter that treats of field works, which, in my humble opinion, are more useful, more solid, less expensive, and more easily built than a variety of others that have been adopted to this day.

The demi-lunes or half-moons which are nearly mitred or crossed, and which I dispose between the counter-guards, have been constructed in that manner for the purpose of stretching as far as possible, beyond the body of the place towards the country. One essential advantage attends this method, which is, that the work being more spacious, it is better calculated to hold a greater quantity of artillery, and a large garrison; that it becomes double by means of the ditch, which separates it from the advanced work, which it covered as described above, and which is joined to the interior revetement by plain walls, separating a whole half-moon from it; in which space a small fort with loop-holes may be constructed to enable the garrison to dispute every inch of ground as the enemy advances. Under the main body of the place, I build a subterraneous chamber, to serve as occasion may require, either for a powder magazine, or for mines.

Between the half-moons and counter-guards, I construct another kind of ravelins, which are open towards the body of the place, cover the curtains of the counter-guards, and supply a double fire against the enemy and the covert way. These ravelins are not raised so high as the other works, in order to keep them under their fire; and I preserve a communication by means of palisaded caponnieres. I leave them empty within, that the besiegers may have as little ground as possible; they are moreover sufficiently thick and solid to withstand the discharge of ordnance, which can only batter in breach from the counterscarp, which acquires double strength, because by means of these works, it is enfiladed, and secured against the enemy's attack or attempt to make a lodgment.

If the plan, which I had the honor of laying before the king of Sardinia, be carefully examined, it must be apparent to every military man, that the works I therein describe, are not only more useful, but capable of being constructed at a less expence, than those which are generally practised to this day. It will be clearly seen, that I have done nothing more than add some additional proportions of the flanks and bastions to the counter-guards, which are usually erected; and that I have augmented their double face, by joining it to the half-moons of the curtain. The object of this addition, is to throw obstacles in the enemy's way, should he attempt to make close approaches, to cover the body of the place, to render the siege difficult, to increase the besieger's expence, and to give confidence to the troops of the garrison, who are thereby no longer exposed, as they must be in all outworks erected upon the foot of the glacis.

It is not, however, my design to throw works of this kind into utter disrepute. There are situations and local circumstances, which not only make their adoption useful, but render it absolutely necessary. I cannot pretend to describe the specific nature of such exigencies, as they grow out of existing cases, which an able general and an engineer will know how to discriminate by examining the ground.

The ditch belonging to the body of the place, be its soil what it may, must be very broad, as the chief security to be derived from it, depends entirely upon its width. The enemy cannot easily fill it up, and he must suffer a considerable loss of men, should he attempt to cross it; being exposed to the discharge of artillery from the flanks, which artillery cannot be dismounted from any quarter or lodgment, before the counter-guards are taken. The storming of the place must depend entirely upon the previous conquest of the side ravelins, and of the centre half moons; for unless the enemy has first effected this, he will not be able to cross the ditch, or make any lodgment, since at every approach he must be annoyed from the flanks, and battered in front; he must, in fact, attack and get the better of five works at once. The execution of any part of so important a task, must be the more dangerous, because in proportion, as he overcomes one line of defence, another presents itself which is equally formidable, and the rest increase in difficulty and hazard.

When I submitted this new method to the consideration of able and intelligent men, only one opponent started to controvert the property of its general adoption. This was a celebrated Dutch engineer, who asserted that it could not be of any essential service, except in hexagons, or figures that had many sides; he further argued, that the method was more faulty in small works, because the angles became more acute, and that no use could be made of them in regular fortification.

I had the good fortune to satisfy this gentleman, and to convince him, that his objections were not well founded. I stated to him, that by increasing the width of the ditch at the angle of the flanks of the bastion, I reduced that angle to any size I judged necessary; I maintained, that by so doing I did not weaken the place; but that on the contrary by cancelling the parallelogram of the counter-guards, I rendered more oblique any battery which the enemy might erect in front of the bastion, whilst the rampart belonging to it fell under a cross fire from the mitred half-moon.

With respect to its uselessness in irregular fortification, after having discussed the subject at some length, I got him to agree with me, that every detached piece of fortification might be constructed any where (and with greater advantage to the ultimate defence of a place) sooner than in plain counter-guards, horn or crown-works, tenailles and such like fortifications, because by means of the retreat which was secured under a second line of retrenchment, by means of the regular resistance it afforded, without having one dead angle attached, and by means of the little ground it left for the enemy to lodge on, the main body of the place was more effectually protected, and the approaches of the enemy were considerably checked.

With regard to the construction proposed in this new method, I take all the measurements, and I mark all the essential points upon capital lines; that is to say, I prolong the lines of the saliant angles of the bastion, and those of the centre of the curtain; after which I determine the width of the ditch at 23 or 24 toises, in order to make the parallels of the faces of the different bastions for the counterscarp of the counter-guards and of the great half-moon, and finally the thickness of the works, to agree with the ditches in front.

With regard to the ravelins which are made between the mitred half-moons and the counter-guards, I place the saliant angle in the centre of the scite, and I construct faces to them in such a manner, that they are under a straight line of defence from the half-moons and counter-guards I erect the counterscarp and glacis in the usual manner, only with this difference that I wish to have a ditch of moderate breadth and depth between the covert-way and the glacis: say, two toises broad upon two deep.

In order to clear the ditch of occasional rubbish that may fall in, or of pieces that may drop from the demolished parts of a fortification during a siege, square excavations or wells must occasionally be made along the flanks and faces of the different works; by which means the ditch is always kept clean, and you may at any time repair the fortifications, whilst on the other hand, the enemy, should he attempt to storm the place, must have recourse to fascines, as he could derive no advantage from the materials that would otherwise be found under the walls."

This ingenious writer has described every part of the method proposed in a clear and perspicuous manner. His plan is particularly valuable, on account of the exact measurements it contains, whereby the most common understanding may become acquainted with the construction. He appears singularly anxious to have it practically proved, that works can be erected according to this method at a less expence than by any other, and that there is no comparison between the advantages it affords in point of real utility. In chap. 16, p. 61, the following account is given of his second system, which he calls the *Great System*.

“ After I had thoroughly digested my plan, relative to the best method of covering a town or fortified place by outworks, it naturally occurred, that I had not provided the necessary means of keeping the troops under shelter, of securing a retreat to the artillery, which is always seized whenever a work is taken by assault, nor of furnishing a heavier discharge of ordnance and musquetry than the enemy could pour in. These important objects put my invention to work, and I directed all the faculties of my mind towards discovering a kind of fortification which might not only cover the body of the place, and by a new disposition of its relative parts communicate equally with every quarter, without there being any necessity to carry the heavy ordnance into the ditch; but likewise oblige the besieging enemy to increase his means of attack, and make extraordinary efforts. I necessarily saw, that the saliant angles of the bastions should be well covered, and that the strongest ought to be raised before the curtain belonging to the body of the place, in order to force the assailants to make their attack on a quarter from whence the concentrated fire of several works, presenting a wide front of artillery, would issue with considerable effect.

After having for several years, directed the whole of my attention to this specific object, and tried the result of my reflections upon paper by a variety of designs; I had the good fortune to discover a method, whose plan exhibits to the eye several pieces that are joined together by their different walls, and in front of which there are ditches covered in with beams and strong oak boards, and made bomb-proof by means of a sufficient quantity of earth that is spread upon the whole. So that it appears evident to me, that there is only one species of fortification, which affords the means of concentrating your line of defence from every quarter, and of lining the parapets with heavy ordnance. By means of this construction, the lines and glacis will be secured against any immediate approaches of the enemy, during which seasonable interruption, the artillery may without risk, be withdrawn and lodged in the interior work; a convenience which cannot be obtained in detached pieces, on account of the difficulty which always attends the first erection, or ultimate demolition of them.

king away the beams, or by destroying them at once, and by pulling down the walls which compose the flanks, you suddenly open a new work upon the enemy; which work has the advantage of being considerably larger than the one he has just attacked and taken, and against which he must raise fresh batteries, and prepare the means of crossing a ditch, he had not foreseen, and which he cannot easily pass. This work either communicates with a tenaille that commands it, or is connected with a horned work, flanked by two others of similar construction. The tenaille is open in the centre (being divided into two parts by a ditch) in order to leave as little room as possible for the enemy to lodge on, and to multiply the enfilading points of the place.

Between these large works, demi-lunes or half-moons, of three orders, are constructed in the shape of bastions. These have orillons and ditches between the two, which flank the side-works, and are always protected by an enfilade, that the enemy never can lodge without being exposed to a cross and rear fire. In order to cover the whole body of the place, I construct other intermediate demi-lunes, which are equal in elevation to the first works. These contribute greatly towards preventing the enemy's approaches; for they not only enfilade the covert-way, but they likewise double the defences in such a manner, that the enemy, as has already been observed, cannot attack one place without experiencing a necessity to attack four others at the same time: to which may be added this disheartening circumstance, that as fast as he advances, so fast a retreat is made behind some new work, and he is, of course, obliged to recommence his attack.

The regular communication between the several works must be kept up by means of sleeping bridges, which are well supported underneath by strong beams or stakes. Those which form a part of the rampart must be covered with four feet of earth, well pressed together. The walls by which the works are connected, must be so built as to be easily demolished, and they must only serve to cover the subterraneous fortifications. These walls are never within the reach of the enemy's cannon, and when they are pulled down, their ruins are thrown into wells, or excavations, which have been previously dug at the foot of the main wall, to prevent the ditch from being filled with them: subterraneous embrasures are opened from within to enfilade the ditch, and to obstruct the passage.

When by dint of perseverance, and after having expended considerable sums of money, lost many lives and consumed much time the enemy has at last obtained possession of these works, he discovers, that his sacrifices have only led him to an unexpected body of the place which he cannot injure. This new construction he finds flanked on both sides by two double bastions, and a broad curtain lined with a triple front of artillery, having a very wide ditch, traversed by tenailles, batteries from casemates, and defended by flanks with the two cavaliers belonging to the bastions, which keep up an incessant fire upon the artillery that is planted in the carried outworks, and render it almost impossible for him to establish a lodgment."

"I need not pretend," continues the same author, "to have discovered by this new method, any certain means of rendering a place impregnable; such an idea would be chimerical and absurd.

Let a town be ever so well fortified, that town, if properly invested and resolutely attacked, must eventually fall, unless it be seasonably succoured from without. My chief object is to correct the errors into which former writers seem to have fallen, and by the methods I have proposed, to harrass a besieging army, not only by increasing its expence, but by occasioning a considerable loss of men; I thereby prolong the siege, and gain time for the garrison, so that succours may arrive, or such conditions be entered into as will secure the country, which the place attacked is destined to cover.

Counter-guards, ravelins, and demilunes are, in fact, a species of fortification by which they flank one another obliquely, and which only tend to embarrass the troops of the garrison, whenever it is judged expedient to manœuvre under the fire of artillery; a circumstance that invariably causes confusion; whereas the works which I have proposed are capacious enough to admit of every movement and evolution without inconvenience.

Horned and crowned works are extremely expensive in their construction, and of little use when completed; their lines of defence, their faces and their flanks are so short and limited, that a besieging enemy can with great ease attack, and carry them by means of an equal front and range of fire: and when he has so far succeeded, he derives considerable advantage from having opened a wide space of ground on which he can erect angles to annoy and batter the place. Whereas in the works of my proposed method, the foundations are broader, the defences are more direct and within musquet shot, and when the garrison retreats towards the body of the place, the ground which it abandons is scarcely sufficient for the erection of a small battery; it is moreover exposed to all the retrenched and flanking points, so that the enemy would be instantly dislodged.

Tenailles and *queues d'hirondelle* contain dead angles which may always be taken advantage of by the besieging enemy. This does not exist in the works I propose. For at every approach, not only fresh expences must be incurred by the assailant, but he will remain exposed to several fires at once, without being able to cover himself from the reverse and cross ones.

Double ditches afford the means of creating perpetual uneasiness in the enemy, by uncovering fresh works as he advances. So that the siege is protracted, his expences are increased, and his loss of men, ammunition, stores, and artillery is proportionably multiplied.

In the examination which was made of the *relief* proposed by me; some persons well acquainted with the particular subject, objected to its adoption on account of the expence. I made an accurate calculation of the amount, and I found that it cost a sixth more than the usual fortification. This does not assuredly form sufficient ground to outbalance the many advantages which can be derived from the construction. Besides, there is no occasion of fortifying all the parts of a town in this manner, since it would be advisable to strengthen the weak points only."

The construction which is proposed in this new method, is simple, and easily understood. The principal objects to be attended to are these; that there be mines under all the works, and that a regular communication be kept up with the chambers by means of subterraneous galleries, which must be resorted to in proportion as the enemy approaches.

The Piedmontese engineer, from whom we have made these extracts, has added to Vauban's and Coehorn's systems. We leave the subject to the consideration of those professional men who have made the art of fortification their peculiar study; they must determine whether the theory of the proposed method be susceptible of practice, and if so, whether it can be rendered so generally useful, as the author seems to promise it would.

On a general view of the subject it must, however, be acknowleged, that a situation is not always found which will admit of the improvements and additions that might otherwise be made. There are some old places in which the figure of the fortifications erected for their defence, is so strange and whimsical, that the least correction of its errors, must be attended with an enormous expence.

A town may be irregularly fortified, and owe that irregularity either to the figure of the works only, by the angles not being equally distant from the centre, although every one may admit of a good bastion, and the lines be tolerably extensive; or by the figure and the angles differing, from some being too acute, and others being rentrant; or by the inequality of the figure and its sides; some being too long and others too short; or finally by a disparity all together in the figure, in its sides and angles.

If the three first kinds of irregular

are judiciously corrected, the correction of the fourth follows of course, as it is only the natural consequence of the others. Those irregularities may be occasioned by a neighboring river, by the entrance into a creek or harbor, or by steep rocks beyond which it is impossible to carry the works.

It is a sound and general maxim in the art of fortifying, to reduce the irregular proportions of its lines, &c of defence to as much regularity as the ground and situation will permit. For by so doing, their strength becomes equally great throughout If you should not be able to surmount the natural obstacle which may be thrown in your way, you must never deviate from the general rules that are laid down in regular fortification. These are, that all the parts be well flanked, that the angles of the bastions do not fall under sixty degrees, that the line of defence be within musquet shot, or that outworks be established to bring it within that range; and finally, that the means of resistance be distributed in as many equal proportions as the irregularity of the works will suffer.

You must, however, be careful to avoid an error into which many have fallen. You must not weaken the collective means of defence, in order to strengthen any particular vulnerable quarter; for by so doing you are sacrificing a great line of defence, to the security of a small part which might be strengthened by outworks.

The author of Oeuvres Militares, in his 3d volume, page 45, has given observations and maxims relative to irregular fortification.

Baron d'Espagnac, in consequence of the remarks which are made by Marshal Saxe, in his *Reveries*, has in his supplement to that work amply discussed the subject of fortification, and described the different means of attack and defence. We refer the inquisitive officer to those works Before we conclude these interesting remarks upon an art, which is certainly equal to any invention that has employed the skill and ingenuity of man, we must observe that in all periods, productions on that head have been as numerous as the subject has hitherto proved inexhaustible. It must, however, be acknowleged with some regret, that the tendency of the greater part, if not of all, seems to be an indiscriminate and bold attack upon the works of the immortal Vauban. These writers censure the methods of that great engineer by proposing something of their own, which only differs in appearance, and which they think proper to call a *superior system*. Assertions, and promises to afford new lights upon the science of fortification, have always, in fact, been profusely given by authors of this description. Their labors, however, are only so far to be regarded and esteemed, in as much as their different systems tend to point out the necessary calculations which are required to shew the expence attending their construction, and to prove the effects they might produce. The memoirs upon perpendicular fortification, written by M. Montalembert engineer, will throw considerable light upon these observations.

With respect to the knowlege of fortification, it must be manifest to every thinking man, that from a chief magistrate, or head of a country, down to the lowest infantry officer, the acquirement of it is more or less indispensibly necessary.

A chief magistrate of a country, should be well versed in the science of fortification, in order to examine the plans that are laid before him, and to determine upon the execution of proposed projects.

A secretary of war should know it, in order to explain the nature of the plans when questioned by a superior power, to calculate the expences which will attend the construction of works, and to distinguish good ones from those which might be useless and expensive.

Every commandant of a town or fortified place, should be well acquainted with the subject, because it may fall to his peculiar share to construct works in cases of emergency, or to add to those already erected for the defence of the place entrusted to his care. He likewise ought, at all times, to be able to ascertain how far such a place is capable of holding out.

Every director of fortification should be master of it, in order to discriminate between what is proper, or what is defective, and make his report accordingly.

Every infantry officer, in a word, should be conversant in field fortification at least, if not acquainted with the general system. For without some knowlege of its branches, how will he, in cases of emergency, be capable of throwing up a temporary redoubt, of fortifying a spot of ground which he is ordered to maintain, or of securing a common outpost?

Field FORTIFICATIONS, *fortifications de campagne*, Fr. consist in the art of fortifying, constructing, attacking, and defending all sorts of temporary field works during a campaign.

Although an engineer may be perfectly master of the different methods by which a town can be strengthened and secured by permanent works, he should not remain satisfied with that acquisition, but carefully direct his attention to the distribution of ground, for field fortification. He should be able to ascertain, with geometrical precision, all the relative divisions and corresponding points of any situation in which it might be judged expedient to construct that species of fortification which consists in intrenched lines, fortins, or small forts, and in redoubts of various denominations. The shape or figure of these works is exactly similar to those of the permanent kind. Ditches, ramparts, and parapets must be dug and thrown up, to secure the former, in the same manner as they are practised for the protection of the latter. They only differ in their measurement and proportions. Intrenched lines are made for the purpose of covering a camp from any sudden insult of the enemy, which should always, on this account, be pitched in the most advantageous manner; contiguous to and facing that quarter where it is probable the attack will be made, a ditch must be dug, having three toises at least in width and two in depth. This must be defended by a parapet *en redans*, or be occasionally flanked with small bastions, two toises thick, consisting of solid good earth well pressed together, covered and supported with fascines; having likewise banquettes behind them sufficiently high to conceal the soldiers' tents. If water could be conveyed, or drawn into the ditch from any adjacent rivulet, or river, the security would be greater. When the lines of intrenchment are thrown up with an intention to maintain the ground any length of time, a covert-way must be made, which should be regularly fenced with palisades.

There is another species of field fortifications, which is resorted to in order to keep up a communication between two places; in which case great care must be taken to prevent the lines from being enfiladed in any quarter; and if they should be exposed in that manner, no time ought to be lost in strengthening the weak points by constructing redoubts, or small forts. The defence of these redoubts and forts must be entrusted to small arms and musquetry, but not to cannon, as the range of the latter is always too extensive to prevent an enemy's close approaches to the lines of communication from their field works, or forts. Necessary drains must be made to let out the water that collects, as it would otherwise destroy the works, drown the sentries, and cut off all communication with the main body.

When a position is taken upon a steep rock, or eminence extremely difficult of access, the lines which surround it do not absolutely require ditches for their safety, as the parapet and banquette may probably be sufficient; but if any vulnerable or weak part be observed, every effort should be used to get at a spring, and to fill up an excavation in front of it, to prevent surprises. An able engineer will be particularly careful in drawing his plan of communication, to ascertain the exact points whereby they may be protected by an enfilade from one fort to another; so that if the enemy should make a lodgment any where, he will not be able to maintain his position on account of his being flanked by other works.

Field works, or small forts are generally constructed in places the preservation of which is judged to be indispensibly necessary. Such, for instance, are necks of land that stretch into a marsh, and are surrounded by it; the passage of a road, *têtes de ponts*, or heads of bridges, and other objects of similar importance in offensive, or defensive operations. On these occasions the shape and size of the construction must depend upon the nature of the ground, the importance of the undertaking, and on the number of men by which the works are to be garrisoned.

Many forts in field fortification are built in triangular forms; some are square, some starred, or *en étoile*, some as redoubts, in the shape of demi-lunes, others in crown, or horn-work, and others again in the figures of tenailles or *queues d'hirondelle*.

When the object of defence is a windmill, a castle, or a small dwelling-house, the first step to be taken, is to select a spot of ground upon which you are to build the field work, so as to check and prevent the enemy's approaches. In order to do this effectually, the shape and adjacent parts of the building must be closely attended to, and the work be thrown up without exposing it to a rear attack; but if the place to be defended stand alone, and be not supported by any ditch or eminence on its flanks, or in its rear, you must then fortify it all round. The earth which is dug out of the ditch will serve to raise the rampart, or parapet. Saliant angles, distributed at equal distances, in the shape of bastions, must be erected with good flanks to protect and cover the intrenchment. If, on account of the ground, the work should not be much raised, the parapet must be raised, in order to prevent the enemy from attempting an easy assault.

An engineer from Piedmont, who has proposed some new methods in field fortification, is decidedly against stone and masonry, in the construction of parapets and field works. His reason is self-evident; for as he justly observes, the scattered pieces which must naturally be thrown about in all directions by the demolishing of the walls in the discharge of heavy cannon, would do more mischief than the cannon itself.

It is frequently found necessary to fortify a bridge; the means adopted for this purpose must depend entirely upon the size and current of the river. If the stream should be broad and navigable, and so far from the fortress, that it cannot be defended by the ordinance of the town or fortified place, in that case a large retrenchment, resembling a place of arms, must be constructed, with strong bastions to support and cover it, curtains and half-moons, a broad and deep ditch, and covert-way that must be well secured by palisades. This retrenchment, or place of arms, must be made sufficiently capacious to hold a garrison that would be capable of opposing the attack of a large detachment from the main army of an enemy. A half-moon must be constructed within the lines, with a ditch in front, to serve as a work behind which the garrison might retreat with its artillery, disputing every inch of ground, and by that means affording sufficient time to cut down the bridge.

If the river should be narrow, yet wide enough to prevent any sudden irruption into the country beyond it, the bridges that are across must be fortified by works made of earth, which are to be covered by ditches dug in front Half-moons, tenailles, crown and horn-works, and similar constructions, provided they be well fenced with palisades, will answer all the purposes required in such cases. The engineer, by the first glance of his eye, will be able to ascertain the situation of the country, and to fit his plans accordingly. Small lodgments, or wooden recesses, must be made as guard-houses, in which detached parties of men should be stationed to meet the first attacks of the enemy, and to keep him in check while the whole army passes over the river, or is drawn up in order of battle to dispute the passage. These intrenchments must invariably be well furnished with light artillery, for the purpose of annoying the approaching enemy. But the disposition and arrangement of these pieces must always be such as to admit of their being instantly removed, when the intrenchments are carried, under the cover of heavier ordnance which is kept playing upon the enemy from the opposite side of the river.

Practical Maxims in building Field Works. 1st The spot on which works are to be constructed should determine their figure; nor should any attention be paid to preserve a regular form which does not occupy the ground to advantage

2d. Every line must be so disposed, that the slope of hills all around even to the very bottom, be open to the small arms of the garrison; and every part should be discoverable to the distance of at least 500 paces

3d. Works thrown up for the defence of a defile, should always be within musquet shot of it, which must not be more than 200 yards.

4th. The best defence in works that are flanked, or where one side is defended by the fire of another, is that formed by right angles.

5th. A saliant angle should never be less than 60, and a re-entering angle than 90 degrees; nor greater than 120 degrees.

6th The entrance to the work should always be made in the part least exposed to attack, and if possible in a re-entering angle.

7th. Endeavor to present, if possible, a larger front to the enemy than he can occupy in making the attack

8th. Avoid all ground commanded by an eminence, either in front, flank, or rear.

9th. Never leave the rear of a work so exposed that the enemy may turn it.

10th Always make the angles of a work in the directions least exposed to attacks, and consequently always present a front to the most exposed

11th. The garrison should never be drawn up more than two deep; and an ordinary pace of two feet is usually allowed for each file, and from 6 to 8 paces from each piece of ordnance.

12th. If a work is so large as to be defended by a battalion or two, a reserve should be allowed of about one sixth of the number.

13th. The space within a work should always be sufficient for the men to move and lie down. Every soldier will require at least 18 square feet, and every field gun at least 216 square feet

14th. Provided the line is not made too extensive, the more inward space there is the better.

15th. A parapet to resist cannon shot should never be less than 12 feet thick; and for musquet shot not less than 6 feet.

16th The height of the parapet must be regulated by the situation of the work, and of the adjoining ground; with this consideration, that its height above the banquette does not exceed 4 1-2 feet.

17th. The depth and breadth of the ditch must be regulated by the quantity of earth required for the parapet and banquette.

18th. A *tête de pont*, or work to cover the embarkation of troops, or the passage of a river, should, if possible, be made where the line of the river or coast forms a kind of re-entering angle; that the flanks of the corps, as well as those of the works, may be covered.

To carry on the work.—The number of workmen must be proportioned to the time allotted for carrying on the work, the quantity of labor, and the number of hands capable of being employed at the same time. When the ditches are broad, the workmen may be posted in two rows; but if narrow, only in one. In the first case, the earth will be thrown by those who are on the outward edge of the ditch to the second row, and by them upon the parapet; for which reason the second row, to keep pace with the first, ought to be twice as numerous. The workmen should never be placed nearer than 2 paces, or 4 feet, from each other; and two men with shovels should be preceded by one with a pickaxe. If more than usual expedition be required, one man with a wheel barrow, or basket, may be added to six or eight with shovels. Another row of workmen should also be placed upon the parapet, to spread the earth and beat it down, as it is thrown up.

In fixing the fascines, three men will be sufficient for every 24 feet of the work, who should be provided with mallets, a saw, and a handbil, or hatchet

In order to form some idea of the time in which a field work may be completed, compute the number of cubic feet of earth to be excavated, thus; multiply half the sum of the breadth of the ditch at top and at bottom, by the depth, for the number of square feet in the profile; and this multiplied by the distance between the workmen in feet will give the number of cubic feet each man has to dig: or being multiplied by the length of the ditch, gives the cubic contents of the ditch. Now one man is supposed to be able to move 216 cubic feet of earth in a day, during the summer; but this is not always the case. If a field work be completed in 24 hours, it will be as much as the most diligent workmen are capable of. This time is generally allowed for the formation of a weak profile; 48 hours for that of a stronger, with a revetement of fascines; and 72 for the strongest.

The different slopes for the works must depend upon the nature of the soil, and the materials of which the work is composed. The interior slope of the parapet, though it be fascined, should be 1-6 of its height; exterior about 2-3 its height. The slope of the banquette equal to its height. The slope of the scarp or counterscarp of the ditch, should be from half its height to its full height, according to the soil. The superior slope of the parapets must entirely depend upon the situation of the work, and that of the surrounding country. The interior slope of the parapet is generally lined with fascines, to keep up the earth; but it is not absolutely necessary to fascine the exterior slope, if the soil be pretty stiff. The embrasures are generally made 20 inches wide on the inside, and 9 feet on the outside; they must always be lined with something to retain the earth; turf is generally preferred, as fascines are so apt to take fire.

The manner of making the materials for field works, may be seen under the heads *Fascines*, *Gabions*, *Hurdles*, &c. and the manner of estimating the quantity of materials for works of this kind, may be seen under the word *Battery* See *Am. Mil. Lib.*

FORTIFICATION....*Permanent.*

A parapet, to resist cannon should never be less than 18 feet thick in earth, and 8 or 9 in masonry. A wall need only be two feet thick in masonry to resist musquetry. The parapet should always be 4 1-2 feet above the banquette, and 7 1-2 or 8 feet above the rampart, or terre-plein.

The *Rampart* should always be sufficiently wide to allow for the platform, and for two carriages passing each other; about 9 fathoms at top. A parapet of earth, though it takes more room, is always preferable to one of masonry, when it can be raised; though the only objection to the masonry, is the number of splinters it produces.

Entire *Revetements* of masonry are not advantageous for the same reason. The masonry of revetements should not be so high as to be seen or battered from a distance; earth parapets are battered in vain, as the earth forms a natural slope.

The best *Scarp* is made of masonry, either in wet or dry ditches, be the earthen one ever so well fraized or palisaded. The earthen one may be stormed without making a breach. The scarp should be 30 or 35 feet high.

The *Counterscarp* should also be of masonry, and not less than 12 feet high. The inconveniences of an earth or low counterscarp, are the impossibility of defending to the last the covert way; as the enemy may descend into the ditch, and again mount the covert way, and get in the rear of the traverses. The enemy may find his way along the natural slope of an earth counterscarp, and is not delayed by a tedious operation of getting into the ditch Besides the natural slope of the end of an earth traverse prevents its effectually covering the covert way.

Ditches are generally 15 or 18 toises wide. Dry ditches are always preferable to wet ones, on account of the shelter they afford the troops, and the ready communication with the outworks, without the constant trouble and danger of bridges.

The *Covert way* should be 5 toises wide; less would croud the troops, and more would allow room for the enemy to erect batteries in it.

The whole of the glacis should be seen, not only from the crest of the parapet, but from the embrasures in the parapet,

The *Tenaille*, must not be so high as to prevent the flank guns in one bastion seeing the breach that may be made in the collateral one.

Ravelins are best without flanks; their faces directed to 10 toises from the shoulders of the bastions.

The crest of the parapet of the body of the place should be 8 feet above the crest of the glacis, to command it across a ditch of 15 or 20 toises.

The crest of the parapet of the ravelin is 3 feet lower than that of the body of the place, in order that it may be more effectually commanded from the place; and therefore to enable the parapet of the ravelin to command its own glacis, the ditch is only made 10 toises, and this glacis is a foot lower than that of the body of the place

There must be an equilibrium of defence established through every front of a fortified place; for it will be needless to strengthen any particular front, if the others from their weakness be left exposed. The following remarks may enable an observer to appreciate the value of particular works, in the proper application and arrangement of which that equilibrium consists.

Intrenchments within the works add much to their defence. In large bastions with obtuse flanked angles, the best intrenchment is formed of the front of a fortification, or of two demi-bastions and a curtain, connecting the angles formed by the flank and curtain. If this intrenchment be advanced to the shoulders of the bastion, so as to include its flanks, as is often the case, it will be subject to be taken in the rear, by the fire from the counter batteries opposed to the flanks. But in bastions with acute flanked angles which do not afford sufficient space for this kind of intrenchment, Cormontaigne proposes one in the form of a cavalier, whose faces and flanks are parallel to those of the bastion. The first kind of intrenchment does not operate in the defence of the place, till after the passage of the ditch; till which time it remains entire, and then capable of a very great defence. The second kind becomes a support to the bastion from the first commencement of the siege; but it is therefore subject to have its defence destroyed at a distance. Nor is its defence equal to that of the other form.

Counterguards should possess the three following properties: 1st. They must cover effectually the principal work before which they are placed; at least that part of it, which can be battered in breach. 2d. They must be lower than the work which they cover; but not so low as to permit its revetement to be seen. 3d. They must be so narrow as not to afford room for the besiegers to erect batteries in them, against the work which they cover, and therefore not leave the besiegers a choice of positions. The counterguards in Coehorn's system are only of earth, through which it is necessary to make an opening, before the capital work can be battered.

Horn or *Crown works*, unless to occupy some important point, to strengthen some weak side, or to afford more room for a confined garrison are rather a weak than a strong arm to a place. This is particularly the case when they are constructed with smaller, and consequently weaker fronts, than that part of the body of the place which they cover: as they facilitate, when taken, the approaches to the body of the place. This is remedied by constructing their fronts of the same strength as the front or fronts which they cover. They also facilitate the taking of the place, by exposing the revetement of the work on which their branches are directed to be battered in breach, along the ditches of those branches This is a great evil, even to an outwork, but is of serious consequence if they rest upon the body of the place. This defect has been remedied by placing these works altogether outside of the covert way, and allowing their ditch no communication with those in the rear. In this case their gorge must be made very secure to prevent its being turned.

An *Advanced Covert way*, is esteemed amongst the best means of adding to the defence of places. Besides the advantages common to the usual covert way, it has many peculiar to itself. It however seems necessary to ensure to it the many advantages of which it is susceptible, (beside being properly palisaded,) that it should be secured in the rear by a wet ditch, as the only means of giving it an inaccessible counterscarp, and at the same time keeping it under the fire of the musquetry of the place. This kind of covert way is generally supported by redoubts upon the capitals of the bastions and ravelins which from their position cannot mask the fire of the place; and being mounted with artillery, oblige the besiegers to commence their attack at a great distance, and very much to extend their operations; and as their establishment upon this covert way must effectually mask the fire of their first batteries, it must greatly increase their labor. The retreat from these redoubts must be secured by an underground passage.

Countermines are undoubtedly one of the first means of strengthening places. For this article we refer to the word *Mines*.

Detached redoubts, when circumstances of situation favor them, are employed with great success. They are usually detached and totally unconnected with any of the works of the place, by any covert way or other above ground work; and have for objects, either the opposing an additional obstacle to the besiegers at the point they occupy, or the rendering the adjoining fronts inaccessible, by an enfilade or reverse fire upon the approaches. They also afford at their gorge, a most excellent rendezvous and retreat for sorties; upon the level of the country, and without the difficulty of filing troops through the barrier of a covert way.

But in order to insure to the detached work or works, all these advantages, it is necessary that they should be either totally inaccessible to the besiegers, by reason of the natural difficulties of their situation, as in an inundation, morass, &c. or be made secure by art, from being taken by storm, and only attackable by regular approaches. They should be under cover of the fire of the place; but if their distance be too great for that, an intermediate work must be established to give them support. Their best form is that of a bastion with retired flanks; and a strong system of countermines the most effectual way of prolonging their resistance.

General remarks...The larger the flanked angles of works, the more direct will be their fire, and that of their covert way, upon the approaches; the greater extent will they oblige the besiegers to occupy in their parallels and batteries; and the more will they oblige the besiegers to expose themselves to the fire of the fronts collateral to the one attacked. Faces of works directed to inaccessible situations, such as rivers, lakes, &c. from whence they cannot be enfiladed by ricochet batteries, add greatly to the strength of a front.

If the flanked angle of a ravelin be so advanced as to see in reverse any battery erected upon the crest of the glacis, or in the covert way of the bastions, it will increase the strength of that front; because it will oblige the besiegers to gain possession of the ravelin, before they can make any lodgment, from which they can batter the bastions. This is the case in Cormontaigne's system: and a place thus fortified, obliges the besiegers to attack and gain two ravelins to get at the bastion between them. Beside, if this system be applied to a right line, or to a polygon of many sides, the prolongations of the faces of the bastions will be intercepted by the flanked angle of the ravelins, and consequently make the establishment of enfilading batteries against them very difficult. A work which admits of a breach being made in it (particularly the body of the place) at a distance, very much facilitates its being taken. The ditch of the ravelin affords an opening through which the besiegers may make a breach in the face of the bastion from the glacis, opposite the flanked angle of the ravelin, and is therefore subject to this defect. A counterguard before the bastion, lessens this evil, by transferring the breach from the body of the place to the ravelin; but it requires a counterguard also before the ravelin, effectually to cure it A crown or horn work also produces this evil; its remedy was given, in speaking of those works.

The direction of the flanks or faces of a work is not so material as relating to the fire of artillery, as to that of musquetry; for artillery is never fired without being pointed, but musquetry is fired mechanically, and perpendicular to the parapet, without much attention to the object to be struck.

A work in the neighborhood of a height must be defiladed* from that height, that is, instead of being built upon a horizontal plane, it must be erected upon an imaginary inclined plane, passing from somewhere in the interior of that work, over the most commanding points of the height: and every part of the works must bear the same relation to this inclined plane, that they would do, to a horizontal plane in a level country.

A work is not therefore always to be condemned, because it is in the neighborhood of a height; for if it be properly defiladed from that height, it will receive a great advantage over the approaches of the besiegers, carried on down an inclined plane towards it. But a work to be properly constructed in the neighborhood of heights, must not uniformly preserve the same distance from those heights, unless their summits be all upon the same level; but must approach them at their lowest parts, and recede from them as they rise; thus will the necessary plane of defilement preserve nearly the same degree of obliquity throughout.

Dimensions of Walls and their Counterforts, from 10 to 50 Feet high, having a Slope of 1-5 their Height.

Wall.					Counterforts.				
height	Thickness at Top.		Thickness at Bottom.		distance between them	Breadth.		Length.	
Ft.	Ft.	In.	Ft.	In.	Feet.	Ft.	In.	Ft.	In.
10	4	0	6	0	8	2	8	4	.
15	4	3	7	3	10	3	4	5	—
20	4	6	8	6	12	4	0	6	—
25	4	9	9	9	14	4	8	7	—
30	5	0	11	0	16	5	4	8	—
35	5	3	12	3	18	6	0	9	—
40	5	6	13	6	20	6	8	10	—
45	5	9	14	9	22	7	4	11	—
50	6	0	16	0	24	8	0	12	—

The heights in the above table are taken only from the bottom of the ditch, and do not include the foundations.

When the rampart is partly walled and partly turfed; then 1-5 of the height of the turfed part must be added to the breadth of the wall at the top given in the table.

The bases of all inward slopes of earth should be equal to their height, if not more.

The bases of all outward slopes of earth 2-3 of their height.

The superior slopes of all parapets 1-6 of their breadth.

The slope of all walls, or revetements 1-5 of their height.

Though the above principles given for the erection of field works may assist an officer's recollection who may be employed on that duty, the memorandums given respecting *permanent* fortification pretend to no such object: but may serve to remind an officer, if he should visit a fortification, of its essential requisites; and may assist his observations in passing round the works

FORTIN, FORTLETT, or FORTILAGE. See Field-Fort.

FORTRESS, any place strongly fortified.

FORWARD, a word of comman

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* *The French use the word* defile *in a contrary sense to* enfile; *and as we admit the words enfilade and enfiladed from the latter, we cannot refuse the terms defilade and defiladed from the former.*

which is given when a regiment, or company has been interrupted in its regular movement, and the march is continued. On this occasion every succeeding division must preserve its proper distance and mark time until the word *Forward*, is given. This frequently occurs in the passage of obstacles, and in the winding of roads, streets, &c,

Right or *Left* } *shoulders* FORWARD, an absurd word of command, used in the British exercise. It is a gross misconception of the French *line of science*, which requires the whole body to face in the given inclination; every man must see that it is impossible for a soldier to march either with ease or grace in such a position. See LINE of SCIENCE.

FOSSE, in fortification. See DITCH.

FOSSES *pleins d'eau*, Fr. Wet Ditches. See FORTIFICATION.

FOSSES *secs*, Fr. Dry ditches.

FOSSES *revêtus*, Fr Ditches that are lined.

FOSSES *non revêtus*, Fr Ditches that are not lined.

FOUCADE, FOUGADE, a small mine.

FOUGASS, in *mining*, a small mine, from 6 to 8 feet under ground: It is generally placed under the glacis or dry ditches.

FOUGETTE. *Fr*. Indian sky-rocket, a species of fire-work which is frequently used by the Asiatics. The author of a late military production in France makes the following observations relative to advantages which might be derived from this weapon against cavalry, and for the defence of fortified places, or intrenchments. He observes, that the fougette, in shape, resembles a sky-rocket, whose flight is gradually brought to run along an horizontal direction. By throwing several fougettes into parks of artillery and upon the caissons, &c. considerable damage might be occasioned from the fire which would inevitably be communicated to some part. A fougette forces itself immediately forward, cuts as it penetrates, by the formation of its sides, which are filled with small spikes, becomes combustible and on fire at all its points; and possesses within itself a thousand various means by which it can adhere to whatever object it is destined to set on fire or to destroy. This weapon would be more effectual, because it might be more variously applied, to defend the mouth of a harbor against an enemy's shipping, than red-hot balls can ever prove. Fougettes might be used on board ships of war, but there would certainly be some danger in the experiment; although, in my humble opinion, a little, experience would effectually remove that difficulty; in which case ships might run along a coast, and easily destroy the wooden works that are sometimes erected on it. They would in the first place occasion more havoc than red-hot balls; and in the next, they might be used whilst the vessel was in full sail; which cannot be done in the first instance. By means of their natural velocity they would do more execution in a less space of time, than the most active piece of ordnance could effect; and they would require fewer hands, as the only necessary operation would be to light and dart them forward. As a defensible weapon it must naturally be allowed, that, where a small body of men is attacked, the fougette might be adopted with considerable advantage.—The writer of this article, who, we find, is likewise the inventor of a fougette which has been submitted to the French government, continues to argue much in favor of its adoption. If, adds he, our enemies should imitate the invention, we must then have recourse, especially in sea-fights to those pieces of ordnance which are calculated to do more execution at a distance; and it will then be our business to contrive fougettes that shall reach their shipping, by means of a greater degree of force and velocity which might be given to them, than they would be capable of attaining. See ROCKET.

FOUILLER, *Fr*. To search. In a military sense, it signifies to detach small bodies of infantry round the flanks of a column that is marching through a wood, for the purpose of discovering an ambuscade, and of giving timely notice that it may be avoided. The same precaution is necessary when a body of men advances towards or enters a village.

FOUNDATION, in military architecture, is that part of a building which is under ground, or the mass of stone, brick, &c. which supports a building, or upon which the walls of a superstructure are raised: or it is the coffer or bed dug below the level of the ground, to raise a building upon; in which sense, the *foundation* either goes to the whole area or extent of the building, as when there are to be vaults, galleries, casemates, or the like; or is drawn in cuts or trenches, as when only walls are to be raised. Sometimes the *foundation* is massive, and continued under the whole building, as in the antique arches and aqueducts; but it is more usually in spaces, or intervals; in which latter case, insulated pillars, bound together by arches, should be used.

There are several things to be well considered in laying the *foundation* of a military building, We must first examine the bed of the earth upon which we are to build, and then the under fillings or substruction. We are not to rest upon any seeming solidity, unless the whole mould through which we cut has likewise been solid; and in such cases, allow 1-6th part of the height of the building for the hollowing or under-digging, unless there be cellars under ground, in which case it may be something less. There are many ways to try the firmness of the ground; but the following, in our opinion, is the best. Take an iron crow, or such a borer as well-diggers use, which at once will point out the goodness and tenacity of the ground.

Engineers should use the utmost diligence in this point; for, of all the errors that may happen in building, those are the most pernicious which are committed in the foundation, because they bring with them the ruin of the whole building; nor can they be amended without very great difficulty.

Foundations are either natural, or artificial: natural, as when we build on a rock, or very solid earth; in which case we need not seek for any other strengthening; for these, without digging, or other artificial helps, are of themselves excellent *foundations*, and most fit to uphold the greatest buildings. But if the ground be sandy or marshy, or have lately been dug, in such case recourse must be had to art. In the former case, the engineer must adjust the depth of the *foundation* by the height, weight, &c. of the building: 1-6th part of the whole height is looked upon as a medium; and as to the thickness, double that of the width of a wall is a good rule. If you build upon mossy and loose earth, then you must dig until you find sound ground. This sound ground, fit to support a building, is of divers kinds: in some places so hard, as scarcely to be cut with iron; in other places very stiff; in other places blackish, which is accounted the weakest; in others like chalk, and in others sandy: but of all these, that is the best which requires most labor in cutting or digging, and when wet, does not dissolve into dirt.

If the earth to be built upon is very soft, as in moorish grounds, or such that the natural *foundation* cannot be trusted, then you must get good pieces of oak, whose length should be the breadth of the trench or about 2 feet longer than the wall; these must be laid across the foundation about 2 feet assunder, and being well rammed down, lay long planks upon them; which planks need not lie so broad as the pieces are long, but only about four inches on a side wider than the basis, or foot of the wall is to be. But if the ground be so very bad, that this will not do, then you must provide good piles of oak of such a length as will reach the good ground, and whose diameter must be about 1-12th part of their length. These piles must be driven down by an engine for that purpose, and must be placed as close as one can stand by another; then lay planks upon them, and pin them fast. But if the ground be faulty in some parts, and firm in others, you may turn arches over those loose places, which will discharge them of the weight. You must not forget to place the piles under the inner, as well as the outer walls; for if these should sink, it would be a means to make the outer walls crack, and so ruin the whole building.

Having thus far considered the bed of the earth on which the building is to be erected, we shall next consider the substruction, as it was called by the ancients; but our modern engineers call it the *foundation*. This is the ground-work of the whole edifice, which must sustain the walls, and may be termed artificial, as the other was natural; with regard to which, the following things are most necessary to be observed: 1. That the bottom be exactly level; therefore lay a platform of good boards. 2. That the lowest ledge or row be all of stone, the broader the better, laid closely without mortar; which is a general caution for all parts of a building that are contiguous to board or timber, because lime and wood are utter enemies to one another, and, if unfit confiners any where, they are more especially so in the foundation. 3. That the breadth of the *foundation* be at least double the breadth of the wall which is to be raised upon it: but even in this case art should give way to discretion: and the foundation may be made either broader, or narrower, according as the ground and the ponderosity of the edifice require. 4. That the *foundation* be made to diminish as it rises, but yet so that there may be as much left on the one side as on the other; so that the middle of that above may be perpendicularly over the middle of that below, which should in like manner be observed in diminishing the walls above ground; for by this means the building will become much stronger than it would be if the diminution were made by any other way. 5. That you should never build on the ruins of an old foundation, unless you are well assured of its depth, and that its strength is sufficient to bear the building.

The stones in the *foundation* should be laid as they naturally lay in the quarry, for they have the most strength in their natural position. This should be observed in all parts of a building, because all stones have a cleaving grain; consequently, if the horizontal position of the stones in the quarry should be placed vertically in the building, the superincumbent weight would be apt to cleave them, and so render the building ruinous.

FOUNDER, a person who casts cannon, &c.

FOUNDERING, a disorder in horses, which may be considered under two heads, viz.

Foundering *in the feet*, which is an universal rheumatism, or defluxion of humors upon the sinews of a horse's feet; so that in the course of time the hoofs become stiff and callous, and the horse has no sense or feeling of them. This disorder is generally brought on by hard riding. Sometimes it proceeds from sudden heats and colds; and frequently from the horse being watered when he is very hot Too tight a shoe, or frequent travelling upon hard flinty ground, will likewise produce this disorder.

Foundering *in the chest*, a disorder which may be occasioned by crudities collected in the stomach, or by other infirmities which obstruct the free action of the lungs. It is discovered by the horse not being able to bend his joints, and, when once laid, by not being able to rise again. A swelling in the legs is likewise symptomatic of it

FOUNDERY, } FOUNDRY, } in military matters, the art of casting all kinds of ordnance, such as cannon, mortars, howitzers, &c. It likewise signifies the place or work-house wherein these operations are performed. At present all pieces of artillery are cast solid, and bored afterwards. Formerly guns were bored perpendicularly, but at present in a horizontal position: the boring instrument is fixed immoveably, and forced into the gun or mortar by a mechanical power. The piece of artillery is turned round by a large wheel, and at the same time the gun is bored, the outside is turned and polished, by another very curious machine for that purpose, invented by the very ingenious Messrs. Verbruggen, founders at Woolwich. Guns were first founded in England in 1587.

FOURAGE, *Fr.* Forage. In the artillery, it is used figuratively to signify hay, straw, or any thing else of vegetable growth, which is used to ram into the bore of a cannon for the purpose of cleansing it.

Aller au Fourage, to go a foraging.

FOURAGER, *Fr.* To forage, or look about for provender and provisions.

Fourager likewise means among the French to ravage, desolate, pillage, and waste a country for the purpose of throwing the inhabitants into disorder. The word is derived from *foras agere*, or to seek for forage in the fields.

Fourageur, *Fr.* foragers, or men employed to procure forage, &c for an army. They are generally escorted. Hence the expression: so many men have been ordered to escort the foragers. The body of foragers has been charged by the enemy's cavalry.

FOURBISSEURS, *Fr.* a sword cutler. The French familiarly say of two persons who are extremely intimate, *Ces gens sont tête-a-tête comme des fourbisseurs*, meaning, that, like sword cutlers, (who when they work sit clossly opposite to each other) they are putting their heads together.

Se battre a l'épée qui est chez le fourbisseur, to fight with a sword which is still in the cutler's hands; signifying figuratively to dispute about any thing that does not concern either party.

FOURGON, *Fr.* a sort of waggon. It likewise signifies a poker.

FOURNEAU, *Fr.* furnace, also the chamber of a mine.

FOURIER, *Fr.* A quarter master belonging to a cavalry or infantry regiment. In France there were *fourriers-majors* of cavalry who composed a part of the cavalry staff. Serjeant fourier, and corporal fourier, answer to our quarter master serjeant.

FOURNIMENT, *Fr.* A horn which holds about one pound of gun-powder to prime cannon. It is likewise used by cavalry and infantry soldiers, who hang it across their shoulder. The artillerists keep it in a belt.

FOURCHETTES *à mousquet*, *Fr.* Rests for a musquet. They are sometimes used to relieve men who do duty on the rampart of a town.

Chemin Fourchu, a cross way

Paix FOURREE, *Fr.* a peace suddenly patched up.

Pays FOURRE, *Fr.* a country thick set with hedges, &c. properly called a close country.

FOURREAU *de pistolet*, a holster.

Faux Fourreau *de pistolet*, pistol bag.

Fourreau *d'epée*, the scabbard of a sword

Fourmiller, *Fr.* to swarm with. *La France fourmille en braves soldats*—France swarms with brave soldiers; *L'Angleterre fourmille en braves marins*—England swarms with brave seamen.

FOUR *de campagne* A field oven.

FOUR, a place of confinement in Paris to which vagabonds and persons who could not give any satisfactory account of themselves were committed; and when once shut up had their names enregistered, and were enlisted for the service of the old French government. A *four* in this acceptation of the term means a room arched over without having the least aperture to receive day light. There were several such places of confinement in Paris. They owed their invention to a Monsieur D'Argenson, and were supposed to add annually two thousand men at least to the king's regular army; by which means the capital was relieved from a multitude of thieves, pick-pockets, &c.

FOURNITURES *des vivres*, Fr. See Stores, &c.

FOYER, *Fr.* Focus, or centre of the chamber. See Mine.

FRAISE, in *fortification*, a kind of stakes or palisades placed horizontally on the outward slope of a rampart made of earth, to prevent the work being taken by surprise. They are generally 7 or 8 feet long, and about 5 inches thick. When an army intrenches itself, the parapets of the retrenchments are often fraised in the parts exposed to an attack.

To Fraise *a battalion*, is to line, or cover it every way with pikes, that it may withstand the shock of a body of horse.

FRAISER, *Fr.* To plait, knead or drill....In a military sense to fraise or fence; as *fraiser un battalion*, is to fraise or fence all the musquetry-men belonging to a battalion with pikes, to oppose the irruption of cavalry should it charge them in a plain. At present it means to secure a battalion by opposing bayonets obliquely forward, or cross-ways in such a manner as to render it impossible for a horseman to act against it.

FRAISES, *Fr.* See FRAISE an adopted English term.

FRANCHES, *Fr* ...*Les campagnies franches*, free companies, were bodies of men detached and separated from the rest of the army, having each a chief, or commandant. They consisted chiefly of dragoons, hussars, &c. and their peculiar duty was to make irruptions into an enemy's country; and may not improperly be called land pirates, as their chief occupation was to harrass and plunder the enemy and his adherents, in whatever manner they could, without paying any regard to military forms. The persons who composed these corps were termed partisans. They always accompanied the main army in time of war, and were distributed among the different garrison towns in France during peace. They were common to every power in Europe; the Pandours and Hulans were of this description. They were the worst afflictions of war; and generally as fatal to their *friends* as their *enemies*.

FRAY, a battle, combat, or duel.

FRICTION, in *mechanics*, the rubbing of the parts of engines and machines against each other, by which a considerable part of their effect is destroyed.

It is hardly possible to lay down general rules for computing the quantity of friction, because it depends upon a multiplicity of circumstances, as the structure, firmness, elasticity, &c. of bodies rubbing against each other. Some authors make the friction upon a horizontal plane, equal to 1 3d of the weight to be moved; while others have found it to be considerably less. But however this be, the doctrine of friction, as ascertained by the latest experiments, may be summed up in the following manner.

1. When one body rests on another upon a horizontal plane, it presses it with its whole weight, which being equally reacted upon, and consequently the whole effect of its gravity destroyed by the plane, it will be absolutely free to move in any horizontal direction by any the least power applied thereto, provided both the touching surfaces be smooth.

2. But since we find no such thing as perfect smoothness in the surfaces of bodies, arising from their porosity and peculiar texture, it is easy to understand, that when two such surfaces come together, the prominent parts of the one will, in some measure, fall into the concave parts of the other; and therefore, when an horizontal motion is attempted in one, the fixed prominent parts of the other will give more or less resistance to the moving surface, by holding and retaining its parts; and this is what we call friction.

3. Now since any body will require a force equal to its weight, to draw it over a given obstacle, it follows that the friction arising to the moving body, will always be in proportion to its weight only, and not to the quantity of the surface, by which it bears upon the resisting plane or surface. Thus if a piece of wood 4 inches wide, and 1 thick, be laid upon another fixed piece of the same wood, it will require the same weight to draw it along, whether it be laid on its broad or narrow side.

4. For, though there be 4 times the number of touching particles on the broad side *(cæteris paribus)* yet each particle is pressed with only 1-4th of the weight, that those are on the narrow side, and since 4 times the number multiplied by one fourth of the weight, it is plain the resistance is equal in both places, and so requires the same force to overcome it.

5. The reason why friction is proportional to the weight of the moving body, is, because the power applied to move the body must raise it over the prominent parts of the surface on which it is drawn; and this motion of the body, as it is not upright, will not require a power equal to its whole weight; but being in the nature of the motion on an inclined plane, it will only require a part of its own weight, which will vary with the various degrees of smoothness and asperity.

6. It is found by experiment, that a body, may be drawn along by nearly 1-3d of its weight; and if the surfaces be hard and well polished, by less than 1-3d part; whereas, if the parts be soft or rugged, it will require a much greater weight.

The ingenious Mr. Emerson, in his principles of Mechanics, has given the following rules deduced from experiments; but they require some variation under different circumstances, which must be left to the judgment of the artist.

1. Wood and all metals, when greased, have nearly the same friction; and the smoother they are, the less friction they have; yet metals may be so far polished as to increase friction by the cohesion of their parts.

Wood slides easier upon the ground in wet weather than in dry, and easier than iron in dry weather; but iron slides easier than wood, in wet weather. Lead makes a great deal of resistance. Iron or steel running in brass, makes the least friction of any. In wood acting against wood, grease makes the motion twice as easy, or rather 2-3ds easier. Wheel-naves, greased or tarred, go 4 times easier than when wet.

Metals oiled make the friction less than when polished, and twice as little as when unpolished

In general, the softer or rougher the bodies, the less or greater their friction

2. As to particular cases: a cubic piece of soft wood of 8 pounds weight, moving upon a smooth plane of soft wood, at the rate of 3 feet per second; its friction is about 1 3d of the weight of it; but if it be rough, the friction is little less than one half the weight.

Upon the same supposition, other soft wood upon soft wood very smooth, the friction is about 1-4th of the weight.

Soft wood upon hard, or hard wood upon soft, 1-5th or 1-half of the weight. Hard wood upon hard wood, 1-7th or 1-8th of the weight

Polished steel moving upon steel or pewter, 1-4th of the weight; moving on copper or lead, 1-5th of the weight; on brass, 1-5th of the weight. Metals of the same sort have more friction than different sorts.

The friction, *cæteris paribus*, increases with the weight almost in the same proportion. The friction is also greater with a greater velocity, but not in proportion to it, except in very few cases. A greater surface also causes somewhat more friction, with the same weight and velocity; yet friction may sometimes be increased by having too little surface to move on; as upon clay, &c. where the body sinks.

3. The friction arising from the bending of ropes about machines, differs according to their stiffness, the temper of the weather, degree of flexibility, &c but, *cæteris paribus*, the force or difficulty of bending a rope is as the square of the diameter of the rope, and its tension, directly; and the diameter of the cylinder or pulley it goes about, reciprocally.

A rope of 1 inch diameter, whose tension or weight drawing it is 5 pounds, going over a pully 3 inches diameter, requires a force of 1 pound to bend it.

4. The resistance of a plane moving through a fluid is as the square of the velocity; and putting v=velocity in feet in a second; it is equal to the weight of a column of the fluid, whose base is the plane, and height $\frac{vv}{64}$ And in a globe it is but half so much.

5. As to the mechanic powers, the single lever makes no resistance by friction; but if, by the motion of the lever in lifting the fulcrum, or place of support, be changed further from the weight, the power will be decreased thereby.

6 In any wheel of any machine, running upon an axis, the friction on the axis is as the weight upon it, the diameter of the axis, and the angular velocity. This sort of friction is but small.

7. In the pully, if p, q, be 2 weights, and q the greater; and $w=\frac{4pq}{p \times q}$, then w is the weight upon the axis of the single pulley; and it is not increased by the acceleration of the weight q, but remains always the same.

The friction of the pullies is very considerable, when the sheaves rub against the blocks; and by the wearing of the holes and axles.

The friction of the axis of the pulley is as the weight w, its angular velocity, the diameter of the axis directly, and the diameter of the pully inversely. A power of 100 pounds, with the addition of 50 pounds, will only draw up 500 with a tackle of 5; and 15 pounds over a single pully will draw up only 14 pounds.

8. In the screw, there is a great deal of friction: those with sharp threads have more friction than those with square threads; and endless screws have more than either. Screws, with a square thread, raise a weight with more ease than those with a sharp thread.

In the common screw the friction is so great, that it will sustain the weight in any position given, when the power is taken off; and therefore the friction is at least equal to the power. From whence it will follow, that in the screw, the power must be to the weight or resistance, at least as twice the perpendicular height of a thread to the circumference described by one revolution of the power; if it be able to raise the weight, or only sustain it. This friction of the screw is of great use, as it serves to keep the weight in any given position.

9. In the wedge, the friction is at least equal to the power, as it retains any position it is driven into; therefore in the wedge, the power must be to the weight at least as twice the base to the height, to overcome any resistance,

10. To find the friction of any engine, begin at the power, and consider the velocity and the weight at the first rubbing part; and estimate its quantity of friction by some of the foregoing articles; then proceed to the next rubbing part, and do the same for it, and so on through the whole.

And note that something more is to be allowed for increase of friction by every new addition to the power.

FRILL. An ornamental appendage to the shirt which officers and soldiers generally wear with regimentals. A small aperture is usually made at the top to admit the hook and eye of the uniform coat. Detached frills for the privates are certainly preferable to those which are fixed to the shirts, as three per week, at the regular times allotted for a change of linen, would answer every purpose of cleanliness.

FRISE *Fr.* See CHEVAUX *de Frize*.

FRISKUTTER. An instrument made of iron, and used for the purpose of blocking up an haven, or a river. The following description of it is among General Monk's observations on political and military affairs.

The beams through which the upright bars pass must be twelve feet in length, and the upright bars that go through the beam must be of that length, so that when one of these iron frisrutters is let down into an haven or river, the perpendicular bars of this iron instrument shall be deep enough to reach at high water within five feet of the surface. See Chevaux-de-Frize.

FROCK, the undress regimental coat is very often so called.

FRONDE, *Fr.* a sling. This weapon was used in France by the Huguenots at Sancerre, as late as the year 1572, in order to save their powder. There are two sorts, one which is used in throwing a stone from the arm, and the other that was fixed to a lever, and was so contrived, that a large quantity of stones might be thrown out of a machine, either from a camp into a besieged town, or from a town into the enemy's camp. This machine has been used since the invention of cannon.

The fronde or sling was used by the Romans on three different occasions, viz. when they sent their light-armed men, called *velites*, forward to skirmish before a general engagement; when they wished to drive the enemy from under the walls of a town which they were preparing to storm, and finally to harrass and wound the men in the enemy's works. This weapon, in fact, together with the bow and arrow, may be numbered among the primitive arms of mankind.

FRONT, a word of command signifying, that the men are to turn to their proper front; this movement is performed at once by revolving on the left heel, without first planting the right foot, as in the facings. If the battalion has been faced to the right, the men turn on this word a quarter circle to the left; if faced to the left, they turn a quarter circle to the right, if they have been faced to the right, or left about, they turn a half circle to the right. When the battalion is marching by files, or is put through its right or left facings, as, To the Right, Face, To the Left, Face, the word *front* is sometimes used to restore it to its natural situation in line. In displaying, or, to use the French term, in *deploying*, from close or open column, or in executing either of those movements from line, the word *front* precedes *halt*.

Front *of a regiment*, the foremost rank of a battalion, squadron, or any other body of men. To front every way, is when the men are faced to all sides.

Quatre hommes de front, four men in front.

Front *of a fortification*. See Face.

Front d'un bataillon, Fr. The front of a battalion, consisting of the leading man of each file. This term is variously used in the French service, as *Un bataillon qui fait front de tous côtés, et presente ses armes par tout.* A battalion which is fronted towards every quarter and presents its arms in every direction. *Un battalion est sur son front* signifies, that a battalion is drawn up so that it presents its natural front in line.

Front *give-point*, a movement of the sword used by the cavalry. See Sword Exercise.

Rear-Front is the disposition of a body of men in line, or column, so that the natural formation of the battalion is changed with regard to aspect, but not to shape. Those files, which in the first telling off were leaders, become followers. It sometimes happens, that to save time a column is ordered suddenly to face about and retire; in this case the different companies march rear front. In the conversion of a regiment, and during the various manœuvres, the divisions, &c. frequently appear *rear front*. They are restored to their natural order by the countermarch. Thus a battalion standing in open column, the right in front, when faced about stands rear front; when countermarched it resumes its original or natural formation, and stands left in front with its proper leading files. When a battalion retiring in line, fires by wings or alternate companies, every retrograde movement is made *rear front*.

FRONTIER, the limits, confines, or boundaries of any country. See Barrier *Towns*.

FUEL, the matter or aliment of fire; any thing capable of ignition.

There is a certain and regulated allowance of fuel made by government, to regiments and companies.

When there is a sufficient number of rooms in a barrack to allow of one to a subaltern of infantry, a full allowance of fuel and candles may be issued for the same.

The weekly deliveries of fuel and candles for every room are not to exceed the given quantities.

FUGEL-MAN, (an incorrect method of pronouncing *flugel-man*) a well drilled intelligent soldier advanced in front of the line, to give the time in the manual and platoon exercises. The word *flugel* is derived from the German, and signifies a wing; the man having been originally posted on the right wing.

FUGITIVE, one who runs from his post, station or duty.

To **FUMIGATE**, in a general acceptation of the term, to medicate or heal by vapours; to correct any infected building, or limited circumference of atmosphere, by smoke, impregnated with antiputrescent particles of heat. Hospitals are strictly ordered to be attended to on this head; especially when any contagious disorder has prevailed. But in no instance ought this important precaution be so scrupulously observed as when troops are embarked for any space of time.

FUMIGATION, the act of fumigating or conveying smoke into any confined place.

The frequent fumigation of every ship on which troops, or prisoners of war are embarked, is deemed highly material, in order to prevent mischief from confined air. The materials for fumigation may be brimstone with saw-dust; or the brimstone may be thrown over hot coals. Nitre, to which a little vitriolic acid is added; or common salt, with the same addition of vitriolic acid. Gun-powder wetted, or the heated loggerhead in the pitch pot.

This operation should always be performed under the immediate eye of the medical officer on board, to prevent improper quantities of the articles being used

FUND. See Stock Purse.

FUNERALS. See Burials.

FUNNEL, any pipe or passage of communication from one place to another.

To FURL, in regard to military flags or colors, is opposed to their exposure; and is used, to express the act of folding them so as to be cased.

FURLOUGH, a leave of absence. Every non-commissioned officer and soldier who obtains leave of absence from his regiment must be provided with a proper voucher to satisfy the commanding officer of any place or party, that he has the sanction of his superiors to pass and repass within a given period.

The following is an eligible form:

According to the authority vested in me by law, I ——— lieutenant colonel ——— commanding the ——— quartered at ——— do issue the following.

"Permit the bearer — private ——— in the above regiment and in captain ——— to pass to ——— in the state of — county of —— for the space of —— ending the —— of —— and then to return to —— as no excuse will be taken but that of sickness, for his over-staying his furlough; and that to be certified by an officer of the army, or civil magistrate; he behaving as becometh. He is —— feet —— inches high, —— years of age, —— complexion, —— hair, —— eyes, &c."

All soldiers found half a mile from a camp or garrison, going towards an enemy's country, or quarters, without a pass, are deemed and treated as deserters.

FURNACE. In a general acceptation of the term, any vessel or utensil for maintaining a strong and searching fire, either of coal or wood.

Furnace is sometimes applied, but improperly so, to that used in the melting of iron, and by some authors it is confounded with iron forges; although there is a considerable difference between them. See Foundry.

Furnace in mining, signifies a hollow, or excavation which is made in the earth and is charged with gun-powder, for the purpose of blowing up a rock, wall, or any part of a fortification.

Mine Furnaces must be made under that part of the glacis belonging to the covert way, which faces the quarter from whence the besiegers will make their principal attacks, the instant they can be ascertained by the opening of the trenches. Several small ones must likewise be sunk under the glacis of the outworks, in order to blow up the lodgments which the enemy may have made when he has carried the advanced posts. Mine furnaces are moreover extremely useful in the defence of the covert way, especially to overthrow the saps and lodgments, together with the batteries that may have been erected by the besieging enemy. For a scientific explanation of this article, see Foissac's last edition of *Traité de la défense des places par le Maréchal Vauban, tom.* ii. pages 202, 224, 240.

FURNITURE. In a general sense means all sorts of moveables made use of for the comfort, or decoration of a house. In a military sense it applies to certain articles which are allowed in barracks, to which are added household utensils, according to the number of rooms.

By the British regulations, commissioned and warrant officers' rooms of cavalry and infantry are to have a closet, 1 table, 2 chairs, a coal box, coal tray, bellows, fire irons and fender.

Non-commissioned officers and private mens' rooms of cavalry and infantry are to be furnished with bedsteads, mattrasses, or paillasses, bolsters, blankets, sheets, rugs, round towel, closet or shelves, 1 table, rack for arms, set of fire-irons, a fender and three forms.

The following *utensils* are also allowed for each room: 2 iron pots with wooden lids, 2 pair of iron pot hooks, 2 iron trivets, 2 wooden ladles; an iron flesh-fork, and a frying-pan, 2 large bowls or platters; 8 small bowls or porringers, 8 trenchers and 8 spoons for cavalry rooms; 12 of each of the three last articles for infantry rooms; a water bucket, coal-tray, candlestick, tin can for beer, large earthen pan for meat, box or basket for carrying coals; 2 drinking horns; a wooden urinal, broom and mop.

The guard rooms of cavalry and infantry are furnished with a water bucket, candlestick, tin can for beer, drinking horns; also with fire irons and a coal-tray, from 1st Sept. to 1st May, when they are to be taken into store.

The rooms of the quarter masters and serjeants of cavalry, and the serjeant major, and quarter master serjeant of infantry, to be furnished with the necessary bedding and utensils, in the same manner as is allowed to the soldiers' rooms.

Each stable of cavalry for 8 horses is provided with 2 pitchforks, 2 shovels, 1 lantern, 1 wheel-barrow, 2 water buckets; and allowed 4 brooms per month.

Horse **Furniture**, ornaments and embellishments which are adopted by military men when they are mounted for service or parade, consisting chiefly of housins, saddle cloth, &c. The following are the usual distinctions in the British service:

Field Marshal, General, Lieutenant General, Major General, Brigadier General,	Saddle cloth or covering leopard skin trimmed with black bear skin,
Colonel of Infantry Lt. Colonel of ditto Major of ditto	White furniture.
Aid de Camp Brigade Major	White do. trimmed with black.

Cavalry—cloth trimmed with silver, or gold. Privates in cavalry regiments—large saddle cloths, the centre of which is yellow, with a border to agree with the facings of the regiment. The tenth regiment of light dragoons is an exception to this general custom. The privates of that corps have a large piece of broad blue cloth which is thrown over the saddle, and covers the horse's loins.

At the commencement of the present war, officers were dispensed from wearing furnitures at reviews, because it was judged very properly that the expence of 14 or 15 guineas for an article which was worn one day in the year, was at such a moment unnecessary.

FUSES, in artillery, are chiefly made of very dry beach wood, and sometimes of horn-beam taken near the root. They are turned rough and bored at first, and then kept for several years in a dry place. The diameter of the hole is about 1-4th of an inch; the hole does not go quite through, having about 1-4 of an inch at the bottom; and the head is made hollow in the form of a bowl.

The composition for fuses is, salt petre 3, sulphur 1, and mealed powder 3, 4, and sometimes 5. This composition is driven in with an iron driver, whose ends are capped with copper, to prevent the composition from taking fire; and to keep it equally hard; the last shovel-full being all mealed powder, and 2 strands of quick match laid across each other, being driven in with it, the ends of which are folded up into the hollow top, and a cap of parchment tied over it until it be used.

When these fuses are driven into the loaded shell, the lower end is cut off in a slope, so that the composition may inflame the powder in the shell. The fuze must be of such a length as to continue burning all the time the shell is in its range, and to set fire to the powder as soon as it touches the ground, which occasions the shell instantly to burst into many pieces.

When the distance of the battery from the object is known, the time of the shell's flight may be computed to a second or two; which being ascertained, the fuse may be cut accordingly, by burning two or three, and making use of a watch, or of a string by way of a pendulum, to vibrate seconds.

Fusee, according to the French acceptation of the word, is applied to various purposes, and belongs to various instruments of destruction which are used in war. The fusee is differently made by different artificers. Some make it consist of one pound of gunpowder, and two or three ounces of charcoal well mixed together; others of four pounds of gunpowder, two of saltpetre, and one of sulphur. It must be generally remarked, that the time a bomb, or grenade, will take to burst after it has been thrown out of the mortar, must depend entirely upon the length and quality of the fusee.

Fusees *à bombes*, Fr. bomb fuses. The intent and object of these fuses, are to communicate fire to the gun-powder, with which the bomb is filled, in order to force it to burst and separate in broken pieces on any given spot. These fuses are usually made in the shape of a wooden pipe or tap, out of the linden tree, the alder, or any other dry and solid wood, and are afterwards filled with a slow combustible composition. The materials are increased, or diminished, according to the nature of their application. Fuses are sometimes made of copper, and they must not have the least aperture or fissure.

There are fuses for bombs of 12, of 10, and of 8 inches diameter. Fuses for bombs of 12 inches diameter, are 8 inches 4 lines long, being 1 inch 8 lines broad at the thick, and 1 inch 2 lines broad at the thin end; the breadth or diameter of the light, or aperture, is 5 lines. Fuses decrease nearly 1 inch in length and 2 lines in diameter, according to the calibre of the bomb. The diameters of the lights or apertures, only diminish one half line.

The composition for bomb fuses consists of seven parts of priming powder to four of salt-petre, and three of sulphur. These different materials are (each separately) first passed through a silk sieve; and after they have been well mixed together, the whole mass is thrown into a moderate sized hair sieve, and again passed through.

The fuse is gradually filled with this composition, each proportion being well pressed in, without violence. Iron ramrods, fitted to the bore of the fuse are used for this purpose. Every time the materials are poured in, the ramrod is inserted, and by means of a small mallet, with which it is struck 14 or 15 times, the composition is pressed into a hard consistency.

When fuses have been well loaded, and the materials have previously been properly mixed, they will naturally burn with an equal steady fire, preserving in general an even length of flame, without spitting or irregularly shaking.

In order to preserve fuses for a length of time, the composition, when thoroughly prepared, must be covered with a mastick or cement made of 2-3ds bees-wax and 1-3d rosin, well mixed together. Bomb fuses prepared in this manner, will burn either in water, or in earth, nearly 70 seconds, without being extinguished.

The usual method of priming fuses, is to grate about one third of a French inch of composition. Two small matches about 5 or 6 inches long, with the ends bent inwards, are then well fixed with pounded composition to the eye of the fuse, by which last operation it is completely filled and closed This part is finally covered over with cartridge paper that is tied, and remains so till there is occasion to use it Before the fuse is driven into the bomb, the thin or small end must be cut off, in order that the fire may be easily communicated to the mass of gun-powder, which is lodged in the bomb.

Fusees *à bombes, à feu-mort*, bomb fuses with dead light. There is a species of bomb-fuse, which is distinguished by the term *feu mort*, or dead-light. The difference between these fuses and the ordinary ones consists in this, that the eye instead of being pierced and hollow, is full and of a half spherical shape. In both cases, however, the composition is introduced through the small end.

The composition for fuses, *à feu-mort*, consists of 16 parts of pounded gunpowder and 9½ parts of ashes. The ashes must be baked over again, and run through a silk sieve. Potter's earth or clay will produce the same effect as ashes.

In proceeding to charge a bomb-fuse that is made of ordinary wood, the eye, or aperture is first closed with pipe-clay, which is well beaten and pressed against the fuse in a small platter; the thin end of the fuse being held upwards. Three lines (or 3 12ths of a French inch) of this earth will be sufficient to stop the communication of any fire. A tube, or trundle, filled with pounded gunpowder for the purpose of setting fire to the composition called *feu mort*, is thrust into the fuse, by which it is finally charged. If this charge of pounded gunpowder were to be omitted, the fuse might not be susceptible of ignition; but the quantity never ought to exceed 3 lines, as the fuse would split by the explosion.

When the grains of gunpowder have been well pounded, a trundle, or tube filled with the aforementioned composition must be applied, and it is finally loaded like the rest.

It must be recollected, that two inches of this composition will last as long as one of the quality with which common fuses are charged. Before the fuse is driven into the bomb, it must be pierced through with a gimblet of one line diameter, taking care, that the hole is made precisely through the charge of pounded gunpowder. One end of a priming match must be forced in, and three others be tied to it, which three are to fall upon the bomb when it lies in the mortar.

The particular object to be obtained from this sort of fuse, is to prevent the least trace of fire or light being visible in its projection; so that the enemy may remain ignorant of the range, or direction of the bomb, and not be able, of course, to get out of the way when it falls, or to avoid the effects of its explosion.

These fuses were made use of at the siege of Ham in 1761. The experiments which were made in 1792, with this composition, by an artificer belonging to the ordnance-board at Douay, have proved, that it answers every purpose for which it is invented.

The author of the *Manual de l'Artilleur*, from whose treatise these observations are taken, concludes this article by stating that the advantages to be derived from this invention are not so great as they at first appear.

He remarks that with respect to the real utility of the fuse *à feu mort*, if it be considered as tending materially to the defence of any besieged place, the argument cannot be very forcible, when we reflect, that to gain time constitutes one of the principal means of defence, and that the only way to obtain it is by retarding the besiegers' operations These ends are gained by various expedients. Among others, the common lighted fuse conduces not a little; since during the whole direction of the bomb against the works of the assailants, the attention of the workmen is diverted from their immediate labour, and as long as it continues in its range, much uneasiness is created, because its ultimate explosion and concomitant destruction are unknown.

Add to this, that independent of the confusion which is occasioned among the assailants by repeated projectiles, the bombadier by means of the lighted fuses, is enabled to correct his aim during the darkest night The same principles must certainly hold good in attacks; and from a conviction of their solid utility in both instances, the common fuses have been hitherto adopted, although the kind in question has been known for several years.

Fusees *à grenades*, Fr. fuses for grenades. These fuses are made of the same quality of wood as those adopted for bombs. Their length is 2 inches 6 lines; their diameter at the head is 10 lines; 7 lines in diameter 1 inch from the head, and 2 lines in diameter to the sight or aperture. The composition of these fuses consists of 5 parts of priming gunpowder, 3 parts of sulphur, and 2 of saltpetre: or 3 parts of priming powder, 2 of saltpetre, and one of sulphur.

These fuses must be loaded with the

same care and precision as are required in bomb-charges; that is, the thick end of the fuse must be placed downwards, so that it stands upright; the composition must then be introduced by means of a trundle, which the French call *lanterne*, made for that specific purpose; the composition must, after that, be well pressed in with an iron ramrod fitted to the bore of the fuse, and gradually forced in by gentle taps with a mallet. Great precaution must be observed during this operation, as too much violence might split the fuse When the fuse has been half filled, a shorter ramrod must be used, with which the charge is completed. In making bomb-fuses great care must be taken to strike equal blows with the mallet until you get to the three last, when the strength of each blow must be increased.

Fusees *d'obus*, Fr. howitzer-fuses. These are generally made of the same composition and wood, as serve for bombs, and are loaded in a similar manner. They have the same dimensions when applied to calibres of 8 or 6 inches diameter; that is, they contain 5 inches 4 lines in length; 15 lines diameter at the small end, 3 lines diameter at the thick end; 13 lines diameter 1 inch from the head; the eye, or vent is 10 lines. These fuses do not exceed the vent of an howitzer, so much as bomb fuses do the vent of bombs. They are in fact, shorter.

Fusees *volantes*, Fr. sky-rockets. These fuses are made of various dimensions, and serve for signals in time of war. They are sometimes 2 inches and more in diameter. The cartridges with which they are loaded, contain in thickness the sixteenth part, or more of the diameter.

The composition which is used for fuses of this description, consists of 16 parts of saltpetre, 7 1-2 of charcoal, and 4 of sulphur; or of 16 parts of saltpetre, 6 of charcoal, 4 of sulphur, and 2 of priming gunpowder. The materials must be carefully pounded and well mixed together. Hollow rods of various lengths are used to charge these fuses. They must have cavity enough to admit the stick

Fuses are tied to long sticks, or rods made of very light wood, such as hazel tree which must have been cut some time, and be perfectly dry. They must likewise be straight, and contain from 7 to 8 feet in length; the thick end of the rod, in which 2 notches are made to fix it to the fuse, must be 7 or 8 lines in diameter, and at the small end 3 to 4 lines diameter. When the rod is rather heavy, it takes a more upright direction than when it is light; but it does not acquire so many degrees of elevation.

It must be generally remarked, that as soon as a fuse is fixed to a grenade, which is not intended for immediate use, you must melt some pitch and immerse the head of the fuse, instantly dipping it into cold water, by which precaution the composition will remain unaltered; unless the wood be rotten.

FUSEE, FUSIL, or **FUZEE,** a light musquet.

FUSILS *à l'épée*, Fr. fusils with long bayonets, shaped like a cut and thrust sword These weapons have been proposed by the writer of *Melanges Militaires*, as being extremely useful in the rear rank of a battalion, or in detached bodies that are stationed for the defence of baggage, &c.

Something similar to this invention has been adopted by the dismounted light horse volunteers in London, who have in addition temporary sword hilts made to fit the sockets of their bayonets.

Fusils, *mousquets*, Fr. a sort of fusil which was invented by Marshal Vauban, and which was so contrived, that in case the flint did not strike fire, the powder might be inflamed by means of a small match which was fixed to the breech.

Fusils *à chevalets*, a species of fusils upon rests, which is recommended by Marshal Vauban, to be used at the commencement of a siege, about 50 or 100 toises in front of the glacis, at the entrances of narrow passes, &c.

FUSILEERS, are soldiers armed like the infantry, with this difference only, that their musquets are shorter and lighter than those of the battalion and the grenadiers. They wear caps which are somewhat less in point of height, than common grenadier caps. There are three regiments in the English service: the royal regiment of Scotch Fusileers, raised in 1678; the royal regiment of Welch Fusileers, raised in 1685; and the royal regiment of Welch Fusileers, raised in 1688-9.

It is always presumed, that these corps, like the guards, possess an *esprit de corps*, which is peculiar to themselves.

As the fusileer regiments upon the British establishment are distinguished from other corps by some peculiarities, we shall briefly state what has occurred to us on the subject. In former times the officers of these regiments did not carry spontoons, but had fusils like the officers of flank companies throughout the line. At present they wear swords. It is necessary to remark, that there are not any ensigns in fusileer regiments; their junior officers rank as second lieutenants, taking precedence of all ensigns, and those of the 7th or Royal Fusileers, have no second lieutenants; so that they rank with the rest of the army according to the dates of their several commissions, as lieutenants. On account of this difference, the first commission in the fusileers was, by a regulation issued from the War Office in 1773, rated fifty pounds higher than that of an ensign; whilst the first commission in the 7th having the pay of lieutenant attached to it, was rated at

500*l*. that of the other two, having only the pay of ensign annexed, was 450*l*.

When the estimates of the British army were made out for the year 1755, the extra sum of 164*l*. 5*s* per annum was charged against the 7th regiment. This surplus, however, was easily explained when it came to be understood, that that regiment, being a fusileer corps, had 20 lieutenants, instead of 11 lieutenants and 9 ensigns. The difference between these commissions amounted to 9*s*. per diem, and the sum total to 164*l*. 5*s*. per annum. The 23d, or royal regiment of Welch fusileers, wear helmets; and all officers belonging to fusileer corps have two epaulettes.

Fusiliers, *Fr.* Fusileers are men armed with fusils or light musquets. When pikes were in use among the French, each regiment had only four fusileers, exclusive of ten grenadiers who carried the fusil or musquet. At present fusils or musquets are universally adopted in the European armies Among the French there was a distinct regiment of fusileers under the immediate command of the grand master of the ordnance. The length of a French fusil was directed to consist of three French feet eight inches from the touch-hole to the muzzle, and the calibre to have the diameter of a ball taking twenty to the pound.

FUYARD, *Fr.* a run-a-way, a coward.

Un corps fuyard, Fr. a regiment that has been in the habit of running away.

FUZE. See **Fusz.**

FUZES. *Composition.*

Saltpet e	3lbs.	4oz.
Sulphur	1	—
Mealed powder . .	2	12

Kind.	Fuse Diameter.			Composition.			Drove by one man in 1 day.
	below the cup.	at the bottom.	at the cup.	Diameter.	Length.	Time it burns.	
Inches.	In	Inch.	Inch.	In.	In.	″	No.
13	2.1	1.575	2.49	.5	8.4	35	25
10	1.8	1.55	2 13	.438	7.2	33	25
8	1.3	1.25	1.78	.375	6.37	29	30
5½	1.1	.825	1.3	.275	4.4	18	50
4⅖	1.0	.75	1.18	.25	3.5	15	703
Grenades.	0.8	.6	.9	.2	2.25		1000

Diameter inside the cup is 3 diameters of the bore.

Depth of the cup 1 1-2 do.

Thickness of wood at bottom of the bore, 2 diameters.

To find the length of Fuzes for any Range. The 13 and 10 inch fuzes of the same length burn so nearly equal, that one common length answers both, as do the 8 inch, 5 1-2 and 4 2-5. Therefore, to find the length of fuze for any range, multiply the time of flight by 22 for the 13 and 10 inch, and by 24 for the 8 5 1-2 and 4 2-5; which is the decimal part of an inch a fuze burns in a second. Fuzes are thought to keep better by being painted; and for field service, are often marked off by black lines into seconds and 1-2 seconds.

G

GABION, in fortification, is a kind of basket, made of ozier-twigs, of a cylindrical form, having different dimensions, according to what purpose it is used for. Some gabions are 5 or 6 feet high, and 3 feet in diameter: these serve in sieges, to carry on the approaches under cover, when they come pretty near the fortification. Those used in field-works are 3 or 4 feet high, and 2 1-2 or 3 feet diameter. There are also gabions, about 1 foot high, 12 inches diameter at top, and from 8 to 10 at bottom, which are placed along the top of the parapet, to cover the troops in firing over it, they are filled with earth.

In order to make them, some pickets, 3 or 4 feet long, are struck into the ground, in form of a circle, and of a proper diameter, wattled together with small branches, in the manner of wattled fences. Batteries are often made of gabions. See **Battery.**

Gabions.—Small gabions of 3 feet high, and 2 feet diameter, are made with least trouble, and are easiest carried. The pickets for them must be 1 1-2 or 2 inches thick, and 4 feet long. Large gabions are 6 feet high, and 3 feet in diameter; and require two men to carry them. The smallest gabions or baskets are formed of pickets, 1 inch in thickness, and 1 foot long: they are 12 inches in diameter at top, and 10 at bottom. The small gabions have 7 or 8 pickets, the large ones 9 or 10.

To make them—The pickets are first to be fixed in the ground in a circle, the size of the bottom of the intended gabion; then a few twigs are to be wove through the upper ends, to keep them from flying out; afterwards the work must be begun at the bottom and continued upwards; and the whole being well driven down with a mallet, the edges must be secured by twigs, wattled up and down. The twigs of willow, birch, hazle, alder, poplar, and beech are proper for this purpose. The top of the gabion must be made very even, because that becomes the bottom when finished. Four men are usually employed on each gabion, with a billhook, a mallet, a spade, and two axes. Two collect the wood, while the other two form the gabion. A 3 foot gabion ought to be made in half an hour

Stuft-**Gabions**, in fortification, are made in the same manner as the former: they are only filled with all sorts of branches and small wood, and are 4 or 6 feet long: they serve to roll before the workmen in the trenches to cover them in front against musquet-shot.

Gabion *farci*, Fr. a stuft gabion.

GABIONADE, *Fr.* a term made use of when a retrenchment is suddenly thrown up and formed of gabions, for the purpose of covering the retreat of troops, who may be obliged to abandon a work, after having defended it to the last extremity. Every parapet that is made of gabions is generally called *gabionade*.

GABIONNER, *Fr.* to cover or secure with gabions.

GAFFLES, the steel lever with which the ancients bent their cross-bows.

GAGES, *Fr.* wages Among the French this phrase signified the fruits or compensations which were derived by individuals from appointments given by the crown, whether of a military, civil, or judicial nature, or for service done at sea or by land

GAIN is frequently used in a military sense, as *they gained the day*, &c.

To **Gain** *ground.* See **Ground**.

GAINE *de flamme*, Fr. a sort of linen sheath or cover, into which the staff of a flag or pendant is put.

Gaine *de pavillon*, Fr. a cloth, or linen-band, which is sewed across the flag, and through which the different ribands are interlaced

Gaines *de girouettes*, Fr. bands, or pieces of linen, with which the vanes are tied to the staff.

GAITERS, a sort of cover for the leg, usually made of cloth, and are either long as reaching to the knee, or short, as only reaching just above the ancle; the latter are termed half-gaiters.

Galeries *Capitales*, Fr. are those galleries which lie under the capitals in works of fortification.

Galerie *tranversale*, Fr. is a gallery in fortification which cuts the capital in a perpendicular direction.

Galerie *meurtriére ou de premiere envelope*, Fr. a gallery which runs under the whole extent of the covert-way, and is frequently carried close to the counterscarp, in order to afford a circulation of air.

Galerie *d'envelope*, Fr. a gallery which is constructed at the extremity of the glacis, and is commonly made parallel to the magistral or principal line of fortification. The *envelope* is the chief gallery in a fortress or garrison-town, and serves as a path of communication or covered way to all the rest.

It is of the utmost consequence to the besieged to secure this gallery from every approach of the enemy; and if any impression should be made, to repair the injury without delay. From this gallery the garrison always direct their attacks, whenever it is necessary to keep the assailants out of the covert-way.

Galerie *d'écoute*, Fr. a gallery in front of the envelope. *Ecouter*, which signifies to listen, sufficiently explains the purpose for which these galleries are erected.

Petites **Galeries**, *ou rameaux*, Fr. small galleries, branches, or *arraignées*, in fortification, which issue from the counter-mine, and at the extremities of which the furnace or chamber for the lodgment of gunpowder is constructed. There is not any established or fixed rule to direct the height to which small galleries, branches, or *arraignées* ought to be carried; in general they should have the least possible elevation.

When galleries are built of mason-work their height is from five to six feet, their breadth from three to four, and sometimes only three.

Galeries *de mines*, Fr. galleries in mining differ from counter-mines, in as much as that they are supported by coffers resting upon frames, which are covered with earth three feet in depth; that is, two feet and a half from one frame to another. These galleries are usually built three feet and a half high, and two and a half broad; and whenever there is a necessity to work in the rameau or arraignée, the galleries in that case are reduced to smaller proportions.

Galerie *magistrale*, Fr. in mining signifies any covered avenue or gallery which is parallel to the magistral or principal line of the place, and exists under the whole or part of the front of the fortifications. This gallery is usually as thick as the enemy's mason-work against which the counter-mine is directed. By means of this work, the besieged generally endeavour to interrupt every attempt which the besiegers may make in the passage of the fossé or ditch

Galerie *à passer un fossé*, a gallery constructed for the purpose of crossing a ditch. It is a small passage made of timber-work, having its beams or supporters driven into the bottom of the ditch, and being covered at top with boards that are again covered with earth, sufficiently strong to bear the miner, and to withstand the effect of artificial fire, or the weight of stones which the enemy might direct against them. This sort of gallery is sometimes called the traverse, or cross way.

These galleries have been out of use for some years. The miner gets at the body of the place which is attacked, either through a subterraneous gallery that is dug beneath the ditch, when the nature of the ground will permit the attempt.

or under cover of the epaulement, which covers the passage of the ditch. When the ditch is full of water, and the miner has made considerable progress under it, he instantly makes the best of his way to the breach, either by swimming, or by supporting his body on a raft of timber; as soon as he has reached the spot, he works into the earth among the ruins of the wall, and completes the object of his enterprize.

Galeries *de communication*, Fr. are subterraneous galleries, by means of which, the garrison of a besieged town or place may, without being perceived by the enemy, communicate from the body of the place, or from the counterscarp, with the different outworks.

Galeries *souterraines des anciens*, Fr. Subterraneous galleries as originally invented by the ancients. The author of the Dictionnaire Militaire in his last edition of that work enters upon the explanation of these galleries by the following curious assertion.

"I must, he observes, in this place, assert with the chevalier Folard, that it would be absurd to deny the superiority which the ancients possessed over us in the essential knowlege and requisites of war, and that they pushed the different branches of that science to as high a pitch of perfection as it was possible to raise it.

"The only inventions which the moderns can boast of, are those of fire-arms, mines, and furnaces. But then, on the other hand, we stand indebted to them for our lines of circumvallation and of contravallation, our approaches or trenches which are effected from a camp to its different batteries, together with the construction of those batteries; our parallel entrenchments or places of arms, the descent into, or the filling up of the ditch, our covered saps in mining, and our open galleries; we owe to them, in fact, the original art of throwing up works and of creating obstacles, by which we are enabled to secure ourselves, or by various stratagems to annoy our enemies. The ancients were indeed superior to us, in the means of defence.

"The origin of subterraneous galleries or passages in mining, is totally unknown to us; a circumstance which proves their antiquity. We read in the History of Josephus, that the Jews frequently made use of them; so that neither the Greeks nor the Romans, who, in many instances arrogate to themselves the exclusive glory of invention, were the authors of this discovery.

"The method which was pursued by the ancients in their passages of mines, resembled the one that is invariably followed by the moderns. But the latter possess a considerable advantage over the former, in this sort of attack and defence, which advantage consists wholly in the invention of gunpowder.

"The ancients, it is well kown, could only undermine in one way; namely under the terraces or cavaliers, or under the towers and battering-testudo-machines (*tortues bélieres*,) and in order to do any execution, they were obliged, in the first place, to construct a spacious high subterraneous chamber, to carry away and raise the earth, to support the remainder by powerful props, and afterwards to fill the several chambers with dry wood and other combustible materials, which were set fire to in order to reduce the towers and various machines that were placed above, into one common heap of ruins. But this attempt did not always succeed; for owing to the magnitude of the undertaking and the time it required, the enemy might either trace the miners, cut off their communication with the main body of the place, or get into the chambers before they could be finished, or be properly prepared for inflammation.

"The ancients constructed their galleries on a larger scale than we adopt. They were wider, but less elevated; whereas those that we use require less trouble; our chamber mines being more contracted, and having an advantage of access by means of the different branches. One or two small chambers are sufficient with us to blow up the whole face of a bastion. But the ancients only sapped in proportion to the extent of wall which they were determined to demolish. This was a tedious operation; for when the besieger had reached the foot of the wall, it became necessary to run a gallery along the whole extent of what he proposed to demolish. Subsequent to this, he had to operate upon the entire front, during which the besieged found time and opportunities to open subterraneous passages, and to discover those which the assailants were practising against them. In the latter, indeed they seldom failed.

"The Romans were extremely partial to subterraneous galleries. By means of these secret passages they took Fidenæ, and Veiæ; and Darius, king of Persia, by the same method took Chalcedon. That species of gallery which is run out under the soil of an encampment, and pushed forward into the very body of a town, has been known from time immemorial. The Gauls were likewise very expert in their management of subterraneous galleries. Cæsar mentions the use of them in five or six places of his Commentaries."

Galerie *de pourtour*, Fr. in architecture, a sort of gallery which is raised either in the inside, or on the outside, and surrounds the whole or part of a building.

GALEA, } a low built vessel for the
GALIOT, } conveyance of troops and stores, having both sails and oars.

GALION, *Fr.* a name which was formerly given to French ships of war that had three or four decks. The term, however, is in disuse, except among the Spaniards, who call vessels *galions*, that sail to Santa Marguerita, to Terra Firma, Carthagena, Porto-Bello, &c.

GALIOTE *à bombes*, Fr. a bomb-ketch. A vessel built of very strong timber, with flat ribs and half decks. It is used for the carriage of mortars, that are placed upon a false deck which is made in the hold. Chevalier Renau first invented this species of naval battery, and submitted it to the French government. The Dey of Algiers having declared war against France, this ingenious man naturally imagined, that the most effectual method which could be adopted to strike terror into the barbarians, would be to bombard their capital, and this, he knew, could not be done, except from the decks of ships. His proposal was at first treated with extreme neglect, and was considered in full council, as the project of a visionary madman.

This disheartening circumstance, however, (which as Monsieur Belidor has very justly remarked, almost always attends original plans and inventions) did not check the warm mind of Chevalier Renau. His known abilities had secured some powerful partisans in his favor, and the French government at last consented, that he should construct two *galiotes à bombes* at Dunkirk, and three at Havre de Grace. Having completed them, he sailed for Algiers; and after having braved the most tempestuous weather, got before the place with five vessels of that description. The town was bombarded during the whole of the night; and so great was the consternation of the inhabitants, that they rushed out of the gates, to avoid the dreadful effects of so unexpected an attack. The Algerines immediately sued for peace, and as M. de Fontenelle has shrewdly remarked, the Chevalier Renau returned to France with his *galiotes à bombes*, having obtained a complete triumph, not only over the Algerines, but over the petty cavillers against his invention.

Orders were instantly issued to construct others after the same model, and the king gave directions, that a new corps of artillery officers should be formed, for the specific purpose of doing duty on board the galiotes or bomb-ketches.

GALLERY, a passage of communication to that part of a mine where the powder is lodged. See GALERIE.

GALLET. *Fr.* See JALET.

GALLIVATS are large row-boats, used in India. They are built like the grab, but of smaller dimensions, the largest rarely exceeding 70 tons; they have two masts, of which the mizen is very slight; the mizen mast bears only one sail, which is triangular and very large, the peak of it, when hoisted, being much higher than the mast itself. In general the gallivats are covered with a spar deck, made for lightness of bamboos split, and these carry only patteraroes, which are fixed on swivels in the gunnel of the vessel; but those of the largest size have a fixed deck, on which they mount six or eight pieces of cannon, from two to four pounders; they have forty or fifty stout oars, and may be rowed four miles an hour.

GALLOPER, a piece of ordnance of small calibre.

GAMACHE, *Fr.* See GAITERS.

GAMBESON, *Fr.* a term which the French formerly applied to a coat of mail that was worn under the cuirass. It was likewise called *cotte gamboisée*. It was made of two strong cloths interwoven with pointed worsted.

GAMBLING. Every species of chance play, such as hazard, &c. should be strictly forbidden in the army. The non-commissioned officers and private soldiers are severely punished when found guilty of this mischievous practice; and in some services the officers are treated with equal severity.

GAMELLE, *Fr.* a wooden or earthen bowl used among the French soldiers for their messes. It generally contained the quantity of food which was allotted for three, five, or seven men belonging to the same room. The porridge-pots for the navy were made of wood, and held a certain allowance. During the monarchy of France, subaltern officers and volunteers were frequently punished for slight offences by being sent to the *gamelle*, and excluded their regular mess, and put upon short allowance, according to the nature of their transgression.

GANTELET, *Fr.* See GAUNTLET.

GANGES, a considerable river in India in Asia. It rises in the mountains which border on Little Thibet, in 82 degrees of east longitude, and 32 degrees 45 minutes of north latitude. According to the ingenious author of the History of Indostan, it disembogues itself into that country through a pass called the straights of Kupele, which are distant from Delhi, about 30 leagues, in the longitude of 96, and in the latitude of 30° 2′. These straights are believed by the Indians, who look very little abroad, to be the sources of the Ganges; and a rock 15 miles distant from them, bearing some resemblance to the head of a cow, has joined in the same part of the country two very important objects of their religion; the grand image of the animal which they almost venerate as a divinity, and the first appearance of that immense body of holy water, which is to wash away all their sins.

GANTLET, } in ancient military
GAUNTLET, } history, a large kind of glove, made of iron, and the fingers covered with small plates: it was formerly worn by cavaliers, or single knights of war, when armed at all points, but is now in disuse.

Gantlet or *gantelope*, denotes a kind of military punishment, in which the criminal running between the ranks receives a lash from every man. See **Run the Gantlet**.

GAP. See **Breach**.

GAR, the general term used by the Saxons, for a weapon of war.

GARCON-*Major*, Fr. an officer so called in the old French service. He was selected from among the lieutenants of a regiment to assist the aid-majors in the general detail of duty.

GARDE *d'une Place*, Fr. the garrison of a place. See **Garrison**.

Garde *du l'armée*, Fr. the grand guard of an army. Guards in the old French service were usually divided into three sorts: *Guard of Honor*, *Fatigue Guard*, and *the General's Guard*. That was called a *guard of honor* in which the officers and men were most exposed to danger; for the quintessence of military honor is to be often in peril, and either to fall courageously in the discharge of duty, or to return from the field after having exhibited proofs of valor, prudence and perseverance A *fatigue guard* belonging to a garrison or to a camp. A *general's guard* was mounted before the door or gate of the house in which the commanding officer resided. For a more specific account of guards in general See **Guard**.

Gardes *de corps*, Fr. the body guards. Under the old government of France they consisted of a certain number of gentlemen or cavaliers whose immediate duty was to attend the king's person. They were divided into four companies, under as many captains, whose tour of duty came every quarter. They took rank above the Gens-d'armes and the king's light cavalry

The first and most ancient of the four companies was called the *Scotch company*.

In 1423 Charles VII of France established this body of gentleman or cavaliers, for the purpose of shewing the great confidence which he placed in the Scots; who were not a little indebted for this mark of distinction to the service which their countryman Lord Buchan, eldest son to the Duke of Albany, rendered the French in 1421 at the battle of Bangé en Anjou, where the English army was completely routed. In order to preserve the remembrance of their behaviour, and in token of their gratitude to the Scotch nation, the French king gave orders that whenever the roll-call took place in the Scotch company, each individual instead of answering Me voila! should say *I am here!* or *here!*

Gardes-*feux*, Fr. wooden cases or boxes used to hold cartridges

Gardes *fous*, Fr. the rails of a bridge.

Garde *imperiale*, Fr. The only guard of honor which at present exists in France

Gardes *Francoises*, Fr. the French Guards—In 1563 Charles IX. King of the French, raised a regiment for the immediate protection of the palace. The colonel of the gardes Francoises was on duty throughout the year, and was entitled to the *baton de commandement* in common with the four captains of the body guards. Peculiar privileges were attached to every officer belonging to this body. No stranger, not even a native of Strasburg, Savoy, Alsace, or Piedmont, could hold a commission in the French guards. The age at which men were enlisted was above 18 and under 50 years. The height 5 French feet 4 inches and upwards. The serjeants were strictly forbidden to exercise any trade or business, and many of them got the *Croix de St. Louis*.

In the revolution of 1789 the French guards took a very active and leading part.

Gardes-*magazins*, Fr. In the old French service there were two sorts of magazine guards:—one for the military stores and the other for the artillery. The first was subject to the grand master, and the second was appointed by the secretary at war.

Garde-*general d'artillerie*, Fr. An officer was so called under the old government of France, who had charge of all the ordnance and stores belonging to his majesty for the land service He gave receipts for all ammunition, &c. and his bills were paid by the treasurer general of the artillery.

Gardes *provinciaux*, Fr. Provincial guards, were persons appointed to superintend, take charge of, and be responsible, for the artillery belonging to Paris, Metz, Chalons, Lyons, Amiens, Narbonne, and Calais.

Gardes *particuliers des magazins d'artillerie*, Fr. Officers appointed by the grand master of the ordnance for the specific purpose of attending to the ammunition, &c Their pay was in proportion to the quantity of stores with which they were entrusted They enjoyed some particular privileges, and were lodged at the expence of government.

Garde *magazin d'un arsenal de marine*, Fr. An officer in France appointed to take charge and to keep a register of all warlike stores, &c for the service of the navy.

Gardes *de la porte*, Fr. A company so called during the monarchy of France, and of so ancient a date, indeed, with respect to original institution, that it appears to have been coeval with it. Mention is made of the gardes de la porte in the oldest archives or records belonging to the king's household, in which service they were employed, without being responsible to any particular treasurer as other companies were.

This company consisted of one captain, four lieutenants, and fifty guards. The captain and officers received their commissions from the king. The first took an oath of fidelity to the king in person, and received the *baton* from his hands. The duty he did was purely discretionary, and depended on his own will. The lieutenants served by detachment, and took their tour of duty every quarter. Their specific service consisted in guarding the principal gate belonging to the king's apartments. Their guard-house was within the palace, which they occupied from six o'clock in the morning until six in the evening; when they were relieved by the body guards. They delivered the keys to a brigadier belonging to the Scotch garrison.

Gardes *Suisses*, Fr. The Swiss guards. This body originally consisted of a certain number of companies which were taken into the French service in consequence of the close alliance that subsisted between the Swiss cantons and France; but they were not distinguished from other troops by the appellation of guards, until a considerable period had elapsed from their first establishment. The zeal, fidelity, and attachment which they uniformly evinced whenever they were entrusted with this distinguished part of the service, induced the crown in 1616 to bestow upon them this additional name.

The regiment was composed of twelve companies of two hundred effectives each. Some consisted of half companies complete in men. They were commanded by the three following officers, subordinate to each other, and created in 1689, viz. One colonel general of the nation, one particular colonel of the regiment, and one lieutenant colonel. The Swiss guards received double the pay which was given to the French guards. It is somewhat remarkable, that one hundred and three years after the regular establishment of the regiment under the three mentioned field officers, this brave body of men should have fallen victims to their attachment to the monarchy of France. On the 10th of August, 1792, they withstood the Parisian populace, and defended the palace in the Louvre until almost every man was killed During the resistance which the Swiss guards made, Louis the XVIth, with his family escaped, and took shelter in the national assembly.

Gardes *(cent) Suisses du corps du Roi*, Fr. One hundred Swiss guards immediately attached to the king's person. They were a select body of men who took an oath of fidelity to the king, and were formed into a regular troop. Louis XIV during several sieges which he personally attended, gave directions, that the head of the trench should be guarded by a detachment of this troop; so that the hundred Swiss guards might properly be ranked as military men, although their officers did not wear any uniform, and in the last periods of the monarchy of France, the principal duties of the hundred Swiss guards consisted in domestic and menial attendance.

Garde *qui monte*, Fr. The new guard.

Garde *qui descend*, Fr. The old guard.

Gardes *ordinaires des lignes*, Fr. ordinary guards.

Garde *de la tranche*, Fr. Guard for the trenches. Among the French, this guard usually consisted of four or six battalions. It was entrusted to three general officers, viz. one lieutenant general on the right, one major general on the left, and one brigadier general in the centre. All general officers, when on duty for the day in the trenches, remained the succeeding night, and never left them until they were regularly relieved by others of their own rank.

When it came to the tour of any particular battalion to mount the trench guard, it was the duty of the major of that battalion to examine the ground on which it was to be drawn up, to look at the piquets, and to see where the grenadiers were posted, in order to go through the relief with accuracy and expedition.

The battalion was drawn up in front of the camp; the grenadiers being stationed on the right, next to them the piquet, and on its left flank the body of the battalion. The latter was divided into different piquets, and formed in order of battle. So that instead of the several companies being posted together, the men were drafted out, and distributed in such a manner, that the whole battalion was separated into troops or companies, each consisting of forty eight men, promiscuously thrown together.

The advantage which was derived from this disposition of the battalion, and from its having been previously told off according to each company's roster, is manifest; for when a second or third battalion piquet was wanted in the trenches, the different detachments were already formed without going into the small detail of companies. The officers in conformity to their roster were ordered to march, and the piquet moved out without a moment's delay.

Add to this that whenever it was found necessary to make a sortie, the loss of men did not fall upon one company, but was divided among the whole battalion.

A general rendezvous or parade was fixed for all the regiments who were to do duty in the trenches; they assembled in that quarter, and were drawn up in line, with all the grenadiers on the right, and the whole of the piquets upon the same alignement. At the hour appointed the latter began to file off, and each regiment followed according to its seniority. The lieutenant general whose tour of command was in the trenches, placed himself at the head of those troops who were to attack from the right; the major general at the head of those belonging to the left, and the brigadier general took the centre; the oldest regiment headed the right, the next in seniority stood in front of the left, and the third preceded the centre.

As soon as the troops reached the tail of the trench, the men marched by Indian files, or rank entire, and each one took his post. Sentries were stationed, and the necessary detachments were made. The colors were planted upon the parapet of the trench. At night the adjutants of corps went to head quarters, to receive instructions relative to the projected attack, and got the parole and countersign from the general. The senior adjutant communicated his orders to the rest, who conveyed the same, first to their several colonels, and afterwards to the serjeants of each regiment.

When on duty in the trenches, soldiers must not, on any account, quit their firearms; and the instant the least noise is heard, it is their duty to throw themselves upon the back of the trench, and there remain till the order is given to march. When an attack is directed to be made, the execution of it is always entrusted to the grenadiers. These are supported by the different piquets, and the main body of the corps follows with the colors.

When the chamade was beat by the besieged with a view to capitulate, it was a rule among the French, that the battalions which were posted in the trenches, might refuse to be relieved, and could remain at their station until the garrison marched out. When the capitulation was signed, it fell to the oldest regiment belonging to the besieging army to take possession of the gate that was delivered up, and that corps remained in the town until a governor was named, and a regular garrison appointed.

Garde *du camp*, Fr. See *Quarter* **Guard.**

Garde *avancée*, Fr. a small body of cavalry, consisting of 15 or 20 horsemen, under the command of a lieutenant, whose station is beyond, but still in sight of the main guard. The particular duty of those men is to watch the motions of the enemy for the greater security of the camp.

During the famous crusade to the Holy Land, the Christians having taken the town of Damietta, and finding it impossible to make further progress, on account of the overflowings of the river Nile, effected a passage over, but neglected to entrench themselves according to the custom of those days. The consequence was, that the Arabs insulted them in their camp, and frequently murdered their sentries at their very tents. In order to prevent these incursions, advanced guards of the description just mentioned were resorted to. Vedettes were posted round the camp, and from hence most probably was derived their origin.

Many methods have been proposed by the military writers of all ages to secure advanced guards from surprise. Frochetta advises fires to be lighted during the night in one quarter, while the rendezvous and station of the guard are in another. His reason is this: if the enemy should approach the quarter which is lighted up, the soldiers belonging to the advanced guard may readily discover him, without being themselves exposed to a direct attack. Onosander is of the same way of thinking. Silence on these occasions is indispensibly requisite. Xenophon, on the other hand, has proposed, that the station should be often changed, and that the guard should consist of different numbers. His object is to form a considerable ambuscade in front of the spot where the guard has been usually posted, so that when the enemy approaches towards it, he may be suddenly surprised by a larger body of men than he expected, and instead of carrying off the ordinary guard, be himself taken prisoner.

Garde *du pont*, Fr. Guard for the security of a bridge. The same author (Frochetta) proposes that one or two sentries be posted at each end of the bridge, if it be of any length. His motive is to prevent too heavy loads from being conveyed upon it, and to check bodies of cavalry who might be disposed to gallop or trot across it. If the bridge be constructed upon barges or boats, there must always be a certain number of wooden scoops to drain off the water as it rises, or gets through small apertures upon the surface. The commanding officer of the guard must order frequent rounds to be made, both night and day, lest the enemy should send divers to get under the boats and pierce the bottoms.

Foresti, the historian, relates, that the Emperor Henry III. having ordered several barges to be constructed and stationed on the Danube for the purpose of storming Posonio, his project was defeated by the bold and desperate act of an individual. One Zormonde, a Hungarian, having provided himself with a gimblet, swam under the surface of the water, and got beneath the boats, which he bored in several places, without the least suspicion or knowlege of the mariners. The boats gradually filled, and were finally sunk, which circumstance obliged the emperor to raise the siege.

Garde *des travailleurs*, Fr. A particular guard which is kept among the workmen and artificers during a siege. In France they had a particular roster among themselves; beginning from the eldest downwards, as well among the officers as among the men.

Garde *relevée*, Fr. the guard that is relieved, commonly called the old guard.

Gardes *de la marine*, Fr. During the existence of the old French government, several young gentlemen received brevet commissions from the king, and were permitted to serve on board ships of war.

They were distributed among the fleet, and when they had acquired a knowlege of their profession, were promoted to the rank of officers. Their duty was near the admiral, when he commanded in person; and during his absence they were placed on board the different vessels, in order to assist the several officers, particularly in the discharge of their functions at the batteries.

GARDES *costes*, Fr. from the Spanish *guarda costa*, signifying ships of war that cruize along the coast to protect merchantmen, and to prevent the depredations of pirates

GARDES *costes (capitaineries)* Fr. The maritime divisions, into which France was formerly divided, were so called.

Each division was under the immediate superintendance of a captain, named *capitaine gardes-costes*, who was assisted by a lieutenant and an ensign. Their duty was to watch the coast, and to attend minutely to every thing that might affect the safety of the division they had in charge.

There were thirty-seven capitaineries *gardes côtes* in Normandy, four in Poitou, two in Guienne, two in Languedoc, and six in French Flanders, Picardy, Boulogne, Calais, &c.

The establishment of sea fencibles in Great Britain, which has taken place during the present war, most probably owes its origin to the *gardes costes*.

GARDE *d'épée*, Fr. Sword-hilt.

GARDE, Fr. Watch, guard, protection.

Corps de GARDE *du guet*, Fr. Watch-house or rendezvous for the street patroles,

GARDE *bois*, Fr. a forest-keeper.

GARDE *du corps*. Fr. life-guard.

GARDE *chasse*, Fr. a game-keeper.

GARDE *pluie*, Fr. literally means a fence, or cover against rain. This machine was originally invented by a Frenchman, who left his native country to avoid persecution or unmerited neglect, and submitted it to the Prussians, who adopted it for the use of their infantry. Other armies, however, either seem ignorant of the invention, or do not think it worthy of imitation. Belair, the author of *Elemens de Fortification*, in his military dictionary, (which forms a small part of that interesting work,) observes, that "these machines might be rendered extremely useful in the defence of fortresses, outposts, redoubts, or retrenchments. Under the cover of them, the besieged, or the troops stationed in the posts attacked, would be able to keep up a brisk and effectual discharge of musquetry during the heaviest fall of rain, and thereby silence, or considerably damp the fire of the enemy. The *garde pluie* is capable of being much improved. Light corps ought to be particularly anxious for its adoption, as the service on which they are generally employed, exposes their arms to every change of weather; and by means of this cover, both themselves, and their rifles, or musquets, would be secured against rain."

Attaquer la GARDE, *Fr.* to make an attempt on the guard.

Une forte GARDE, *Fr.* a strong guard.

Un piquete de GARDE, *Fr.* a piquet guard.

La GARDE *à pied*, Fr. the foot guards.

La GARDE *à cheval*, Fr. the horse guards.

La GARDE *Ecossoise*. Fr. the Scotch guards.

La GARDE *Irelandoise*, Fr. the Irish guards.

Faire monter la GARDE, *Fr.* to set the guard.

Etre de GARDE, *Fr.* to be upon guard.

Monter la GARDE, *Fr.* to mount guard.

Descendre la GARDE, *Fr.* to come off guard.

Rélever ou changer la GARDE, *Fr.* to relieve guard.

La GARDE *montante*, Fr. the guard that mounts, or the new guard.

La GARDE *descendante*, Fr. the guard that comes off, or the old guard.

GARDE *à vous*, Fr. A cautionary phrase made use of in the French service. We formerly adopted the term, *take care*, or *have a care*—at present we use the word *attention*, which is usually pronounced '*tention*.

GARDENS, in *ancient military history*, places of resort to practice military exercises.

GARGOUILLIS, *Fr.* the powder with which cannon is charged.

GARGOUSSE, *Fr.* a cartouch, a cartridge

GARGOUSSIERE, *Fr.* a pouch for cartridges.

GARLAND, a sort of chaplet made of flowers, feathers, and sometimes of precious stones, worn on the head in the manner of a crown. The word is formed of the French guirlande, and that of the barbarous Latin garlanda, or Italian ghirlanda. Both in ancient and modern times it has been customary to present garlands of flowers to warriors who have distinguished themselves. Among the French the practice is still familiar. A beautiful young woman is generally selected for the purpose.

GARNIR *d'artillerie*, Fr. to line with artillery. *Un rampart garni de grosse artillerie*, a rampart covered or lined with heavy ordnance.

Se GARNIR, *Fr.* To seize.

GARNISH-*nails*. Diamond headed nails, formerly used to ornament artillery carriages.

GARNISON, *Fr.* See GARRISON.

GARNITURE. See EQUIPAGE, &c.

GARRISON *des Janissaires*, Fr. The elite or flower of the Janissaries of Constantinople is frequently sent into garrison on the frontiers of Turkey, or to places where the loyalty of the inhabitants is doubted. The Janissaries do not indeed assist in the immediate defence of a besieged town or fortress, but they watch the motions of all suspected persons, and are subject to the orders of their officers, who usually command the garrison.

GARRISON, in the *art of war*, a body of forces, disposed in a fortress or fortified town, to defend it against the enemy, or to keep the inhabitants in subjection; or even to be subsisted during the winter season: hence garrison and winter-quarters are sometimes used indiscriminately for the same thing; while at others they denote different things. In the latter case a garrison is a place wherein forces are maintained to secure it, and where they keep regular guards, as a frontier town, a citadel, castle, tower &c. The garrison should always be stronger than the townsmen.

Winter-quarters signifies a place where a number of forces are laid up in the winter season, without keeping the regular guard. See WINTER-QUARTERS.

GARRISON-*town*, generally a strong place in which troops are quartered, and do duty, for the security thereof, keeping strong guards at each port, and a main-guard in, or near the market-place.

Order of the **GARTER**, an English order of knighthood, instituted by Edward III. This order consists of 26 knights companions, whereof the king of England is the sovereign or chief.

This piece of regal mummery is not strictly military, but is inserted here as matter of curiosity.

All these officers, except the prelate, have fees and pensions. The college of the order is in the castle of Windsor, with the chapel of St. George, and the chapter-house, erected by the founder for that purpose. The habit and ensign of the order are, a garter, mantle, cap, George, and collar. The 3 first were assigned the knights companions by the founders; and the George and collar by king Henry VIII. The garter challenges pre-eminence over all other parts of the dress, because from it the noble order is denominated; that it is the first part of the habit presented to foreign princes, and absent knights, who, together with all other knights elect, are therewith first adorned; and it is of such honor and grandeur, that by the bare investiture with this noble ensign, the knights are esteemed companions of the greatest military order in the world. It is worn on the left leg, between the knee and calf, and is enamelled with this motto, *Honi soit qui mal y pense*: that is, "Evil be to him, who evil thinks." The meaning of which is, that king Edward having laid claim to the kingdom of France, retorted shame and defiance upon him that should dare to think amiss of the just enterprize he had undertaken, for recovering his claim to that crown; and that the bravery of those knights whom he had elected into this order, was such as would enable him to maintain the quarrel against those that thought ill of it.

The mantle is the chief of those vestments made use of upon all solemn occasions. The color of the mantle is by the statutes appointed to be blue. The length of the train of the mantle, only, distinguishes the sovereign from the knights companions. To the collar of the mantle is fixed a pair of long strings, anciently wove with blue silk only, but now twisted round, and made of Venice gold and silk, of the color of the robe, with buttons and tassels at the end. The left shoulder of the mantle is adorned with a large garter, and device *Honi soit*, &c. Within this is the cross of the order, which was ordained to be worn at all times by king Charles I. At length the star was introduced, being a sort of cross irradiated with beams of silver.

The collar is composed of pieces of gold in fashion of garters, the ground enamelled blue, and the motto gold.

The garter is of blue velvet bordered with fine gold wire, having commonly the letters of the motto of the same: it is, at the time of installation, buckled upon the left leg, by two of the senior companions, who receive it from the sovereign, to whom it is presented upon a velvet cushion by Garter king at arms, with the usual reverence, whilst the chancellor reads the following admonition, enjoined by the statutes. "To the honor of God omnipotent, and in memorial of the blessed martyr St. George, tie about thy leg, for thy renown, this noble garter; wear it as the symbol of the most illustrious order, never to be forgotten, or laid aside; that thereby thou mayest be admonished to be courageous, and having undertaken a just war, in which thou shalt be engaged, thou mayest stand firm, valiantly fight, and successfully conquer."

The princely garter being thus buckled on, and the words of its signification pronounced, the knight elect is brought before the sovereign, who puts about his neck, kneeling, a sky colored riband, whereon is appendant, wrought in gold within the garter, the image of St. George on horseback, with his sword drawn, encountering the dragon. In the mean time the chancellor reads the following admonition: "Wear this riband about thy neck, adorned with the image of the blessed martyr and soldier of Christ, St. George, by whose imitation provoked, thou mayest so overpass both prosperous and adverse adventures, that having stoutly vanquished thy enemies both of body and soul, thou mayest not only receive the praise of this transient combat, but be crowned with the palm of eternal victory."

Then the knight elect kisses his sovereign's hand, thanks his majesty for the great honor done him, rises up, and salutes all his companions severally, who return their congratulations.

Since the institution of this order, there have been 8 emperors, and 28 kings, besides numerous sovereign princes, enrolled as companions thereof. Its origin is somewhat differently related: the common account is, that it was erected in honor of a garter of the countess of Salisbury, which she dropped dancing with king Edward, and which that prince picked up; but others think it was instituted on account of the victory over the French at Cressy, where the king ordered his garter to be displayed as a signal of the battle.

GASCONADE, a boast or vaunt of something very improbable. The term is originally derived from the Gascons, or people of Gascony in France, who it seems have been particularly distinguished for extravagant stories.

GASCONADE, Fr. *pour menterie, ródomontáde, filouterie*; a lie, a *ródomontáde*, an imposition.

GASCONNER, *Fr.* to gasconade, to repeat extravagant, wild stories.

GATE, an entrance, a large door, the passage into a walled place; in a military sense, is made of strong planks with iron bars to oppose an enemy. Gates are generally fixed in the middle of the curtain, from whence they are seen and defended by the two flanks of the bastions. They should be covered with a good ravelin, that they may not be seen or enfiladed by the enemy. The palisades and barriers before the gates within the town are often of great use. The fewer ports there are in a fortress, the more you are secured against the enemy. At the opening of a gate, a party of horse is sent out to patrole in the country round the place, to discover ambuscades or lurking parties of the enemy, and to see if the country be clear.

GAUCHE, *Fr.* The left.

A GAUCHE, *Fr.* On the left.

GAUGE. See STANDARD.

GAUGES, in gunnery, are brass rings with handles, to find the diameter of all kinds of shot with expedition.

GAULS, the name given by the Romans to the inhabitants of the country that now forms part of the kingdoms of Italy and France. The countries were called *cisalpine*, and *transalpine* Gaul, with reference to the position of Rome. The original inhabitants were descended from the Celtes or Gomerians, by whom the greatest part of Europe was peopled: the name of Galli or Gauls, being probably given them long after their settlement in that country.

GAUNTELOPE. } See GAUNTELOPE. *Run the*
GAUNTLET. } GAUNTELOPE.

GAZETTE, a newspaper. The word is derived from *gazetta*, a Venetian coin, which was the usual price of the first newspaper printed there, and which name was afterwards given to the paper itself.

The first gazette in England was published at Oxford, the court being there, in a folio half sheet, November the 7th, 1665. On the removal of the court to London, the title was changed to the *London Gazette*. The Oxford Gazette was published on Tuesdays, the London on Saturdays. And these have continued to be the days of publication ever since that publication has been confined to London.

All commissions in the British army, militia, fencible, and volunteer corps must be gazetted. The dates specified in the gazette generally agree in every point with those of the original commissions. So that by referring to the gazette, an officer may always know the precise day on which he is entitled to receive subsistence from the agent, and to assume rank in the British army. Should an erroneous statement, however, get into the gazette, or a commission be wrong dated therein, a reference to the latter will always supersede any notification in the former.

GAZONS, in fortification, are pieces of fresh earth or sods, covered with grass, and cut in the form of a wedge, about a foot long, and half a foot thick, to line the outsides of a work made of earth; as ramparts, parapets, banquettes, &c. The first bed of gazons is fixed with pegs of wood: and the second bed is so laid as to bind the former, by being placed over its joints; and so continued till the works are finished. Betwixt those sods it is usual to sow all sorts of binding weed or herbs, in order to strengthen the rampart.

GEAR, furniture, equipage, or caparison.

GEAT, the hole through which the metal is conveyed to the mould in casting ordnance.

GEBEGIS. Armorers among the Turks are so called.

GEBELUS. Every timarist in Turkey, during a campaign, is obliged to take a certain number of horsemen, who are called gebelus, and to support them at his own expence. He is directed to take as many with him as would annually cost three thousand aspres (each aspre being equal to two-pence farthing English) for subsistence.

GELD, in the English old customs, a Saxon word signifying *money*, or tribute. It also denoted a compensation for some crime committed. Hence *wergeld*, in the old Saxon laws, was used for the value of a man slain; and *orfgeld*, for that of a beast.

GELIBACH. A sort of superintendant or chief of the gebegis, or armorers among the Turks. He is only subordinate to the *toppi bachi*, or the grand-master of the Turkish artillery.

GENDARMERIE, *Fr.* the gendarmerie was a select body of cavalry that took precedence of every regiment of horse in the French service, and ranked immediately after the king's household. The reputation of the gendarmerie was so great, and its services so well estimated by the king of France, that when the emperor Charles V. in 1552, sent a formal embassy to the Court of Versailles to request a loan of money, and the assistance of the gendarmerie to enable him to repulse the Turks; Francis I. returned the following answer: "With respect to the first object of your mission, (addressing himself to the ambassador) I am not a banker; and with regard to the other, as my gendarmerie is the arm which supports my sceptre, I never expose it to danger, without myself sharing its fatigue and glory."

The uniform of the gendarmerie, as well as of the light cavalry, under the old French government, was scarlet, with facings of the same color. The coat was formerly more or less laced with silver according to the king's pleasure. A short period before the revolution, it was only laced on the cuff. The waistcoat of buff leather, and the bandouleer of the same, silver laced; the hat was edged with broad silver lace. The horsecloths and holster-caps were red, and the arms of the captain embroidered on the corners of the saddle cloths, and on the front of the holsters. In 1762, a considerable body of men was raised by order of Louis XIV. The soldiers who composed it were called gensdarmes. And in 1792, the number was considerably augmented, consisting of horse and foot, and being indiscriminately called gens d'armes; but their clothing was altered to deep blue. Their pay was greater than what the rest of the army enjoyed, and when others were paid in paper currency, they received their subsistence in hard cash *(en argent sonant.)* They possessed these privileges on account of the proofs they were obliged to bring of superior claims to military honor, before they could be enlisted as gendarmes. It was necessary, in fact, that every individual amongst them should produce a certificate of six or eight years service.

GENDARMES (gens d'armes) *de la garde*, a select body of men so called during the old government of France, and still preserved in that country; but their services are applied to different purposes. They consisted originally of a single company which was formed by Henry IV. when he ascended the throne. He distinguished them from his other troops, by stiling them *hommes d'armes de ses ordonnances*: men at arms under his own immediate orders. They consisted of men best qualified for every species of military duty, and were to constitute a royal squadron at whose head the king himself might personally engage the enemy, as necessity might require. He gave this squadron to his son, the Dauphin, who was afterwards king of France, under the name and title of Louis XIII.

GENERAL, in a military sense, is an officer in chief, to whom the government of a country have judged proper to entrust the command of their troops. He holds this important trust under various titles, as captain-general, in England and Spain, *feldt mareschal*, in Germany, or *mareschal*, in France.

In the British service the king is constitutionally, and in his official right, captain-general. He has ten aids-de-camp; every one of whom enjoys the brevet rank of full colonel in the army. Next to the king is the commander in chief, whom he sometimes honors with the title of captain-general. During the expedition to Holland the Duke of York was entrusted with this important charge.

The natural qualities of a GENERAL, are a martial genius, a solid judgment, a healthy robust constitution, intrepidity and presence of mind on critical occasions, indefatigability in business, goodness of heart, liberality, a reasonable age; if too young, he may want experience and prudence; if too old, he may not have vivacity enough. His conduct must be uniform, his temper affable, but inflexible in maintaining the police and discipline of an army.

Acquired qualities of a GENERAL should be secrecy, justice, sobriety, temperance, knowlege of the art of war from theory and practice, the art of commanding, and speaking with precision and exactness; great attention to preserve the lives and supply the wants of the soldiers, and a constant study of the characters of the officers of his army, that he may employ them according to their talents. His conduct appears in establishing his magazines in the most convenient places; in examining the country, that he may not engage his troops too far, while he is ignorant of the means of bringing them off; in subsisting them, and in knowing how to take the most advantageous posts, either for fighting, retreating, or shunning a battle. His experience inspires his army with confidence, and an assurance of victory; and his good qualities, by creating respect, augment his authority. By his liberality he gets intelligence of the strength and designs of the enemy, and by this means is enabled to take the most successful measures. He ought to be fond of glory, to have an aversion to flattery, to render himself beloved, and to keep a strict discipline and regular subordination.

The office of a GENERAL is to regulate the march and encampment of the army; in the day of battle to choose out the most advantageous ground; to make the disposition of the corps; to post the artillery, and, where there is occasion, to send his orders by his aids-de-camp. At a siege he is to cause the place to be invested, to regulate the approaches and attacks, to visit the works, and to send out detachments to secure the convoy, and foraging parties.

GENERALISSIMO, a supreme and absolute commander in the field. This word is generally used in most foreign languages. It was first invented by the absolute authority of cardinal Richelieu, when he went to command the French army in Italy.

General *of the artillery*. See **Ordnance**.

Generals *of horse* are officers next under the general of the army. They have an absolute command over the horse belonging to an army, above the lieutenant generals.

Generals *of foot* are officers next under the general of the army, having an absolute command over the foot of the army.

General *officers*. All officers above the rank of colonel in the line are so called.

General. In the German armies, and among the sovereigns of the North, there are certain generals of cavalry, and others of infantry, who take rank of all lieutenant generals. Those belonging to the infantry, in the imperial service, and who are of this description, are called *general field zeugmeisters*. In Russia they bear the title of generals in chief; of which class there are four belonging to the armies of that empire, two for the infantry and two for the cavalry. They are only subordinate to field marshals; which title or dignity is the same in Russia as was formerly that of marshal of France.

In the two imperial armies just mentioned, it is usual for generals, lieutenant generals, and major generals to take their routine of duty, and rise progressively in the infantry or cavalry corps, to which they were originally appointed, until they arrive at a chief command; whereas in France a major general might be employed to take charge of either infantry or cavalry, without any regard being paid to the particular line of service in which he was bred.

General *chez les Turcs*, Fr. Turkish generals.

The Turks have had brave generals. They possess experience, because from their earliest infancy they become inured to arms; because through the different stages of acknowleged service, they rise by degrees; and because their empire being very extensive, it is necessary that they should over-run several provinces for its protection, and be almost constantly engaged in skirmishes or battles. These, at least, were the original principles upon which the military code of that country was established. But abuses, the natural consequences of corruption, have since crept in amongst them; for there have been persons suddenly raised from subordinate employments under the Porte to the supreme command of armies. The primary cause of this abuse is to be found in the luxury and effeminacy of the grand signors, who are become heedless of the Mahomedan laws, and never go to war in person.

The acknowleged valor of the Turkish generals may be attributed to the following causes. To a constitution which is naturally robust, to a practical knowlege of war, and to habitual military exercises.

To these may be added the confidence with which they are inspired by the recollection of former victories; but they are influenced above all, by the secret dictates of a religion, which holds out eternal happiness to those who shall die in battle, and which teaches them to believe, that every Turk bears written on the forehead, not only the hour of his departure from this earth, but the manner of his removal.

A Turkish general possesses a power as absolute and uncontroled as that which was entrusted to the dictators of the Roman republic. He has no competitor, or equal in the charge he holds, no assistants or colleagues with whom he is directed to consult, and to whose assent or dissent, in matters of consultation, he is to pay the least regard. Not only the army under his command, but the whole country into which he marches, is subject to his orders, and bound implicitly to obey them. Punishments and rewards are equally within his distribution. If an authority so absolute as this be considered in the light of executive effect, nothing most unquestionably can so readily produce it; for the tardiness of deliberation is superseded at once by a prompt decision, before which all sorts of objections, and every species of jealousy, subside. When a project is to be fulfilled, secrecy is the natural consequence of this arbitrary system, and rational plans are not interrupted by a difference of opinion, by prejudice, or cabal.

General *de bettaile*, or } a particular
General *major*, } rank or appointment, whose functions correspond with those of a ci-devant marshal of France. This situation is entrusted to a general officer, and is only known among the armies of Russia, and some other northern powers. He takes precedence in the same manner that our major generals do, of all brigadier generals and colonels, and is subordinate to lieutenant generals. The rank of brigadier general is known in France, Russia, England, Holland, and the United States. It does not exist in Austria or Sweden.

General *des galéres*, Fr. Superintendant officer, or general of the gallies. This was one of the most important appointments belonging to the old government of France. The officer to whom it was entrusted commanded all the gallies, and vessels which bore what the French call *voiles latines* (a triangle rectangular sail) in the Mediterranean. He had a jurisdiction, a marine police, and an arsenal for constructing ships under his own im-

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mediate command, without being in the least subordinate to the French admiralty board. When he went on board he was only inferior in rank to the admiral.

The privileges which were attached to his situation, and the authority he possessed with regard to every other marine, or sea officer, were specifically mentioned in the king's regulations, and were distinguished by the respect and compliments that were paid to the royal standard, which this general bore, not only on board his own galley, but whenever he chose to hoist it in another.

During the reign of Louis XIV. in 1669, the Duke de Vivone, marshal of France, raised the reputation of the galley service, to a considerable degree of eminence, by gaining several hard fought engagements. His son the Duke de Mortemart succeeded him in the appointment; and the chevalier d'Orleans, grand prior of France, was general of the gallies at his decease.

G**ENERAL** *des vivres*, Fr. a sort of chief commissary, or superintendant general of stores, whose particular functions were to provide ammunition, bread, and biscuit for the army. There were several subordinate commissaries who watched the distribution of these stores, and saw, that the bakers gave bread of the quality they contracted for. It was likewise within the department of the superintendant general to attend to the collection of grain and flour, and to see that proper carriages and horses were always at hand to convey them to the several depots or magazines. The different camps were also supplied from the same source. See M**UNITIONNAIRE**.

G**ENERAL** *and staff officers* are all officers as above described, whose authority extends beyond the immediate command of a particular regiment or company, and who have either separate districts at home, or commands on foreign service.

Lieutenant G**ENERAL**, this office is the first military dignity after that of a general. One part of the functions belonging to lieutenant generals, is to assist the general with counsel: they ought therefore, if possible, to possess the same qualities with the general himself; and the more, as they often command armies in chief, or succeed thereto on the death of the general.

The number of lieutenant generals have been multiplied of late in Europe, in proportion as the armies have become numerous. They serve either in the field, or in sieges, according to the dates of their commissions. In battle the oldest commands the right wing of the army, the second the left wing, the third the centre, the fourth the right wing of the second line, the fifth the left wing, the sixth the centre, and so on. In sieges the lieutenant generals always command the right of the principal attack, and order what they judge proper for the advancement of the siege, during the 24 hours they are in the trenches, except the attacks, which they are not to make without an order from the general in chief. Lieutenant generals are entitled to two aids-de-camp.

Lieutenant G**ENERAL** *of the ordnance*. See O**RDNANCE**.

Lieutenant G**ENERAL** *of artillery*, is, or ought to be, a very able mathematician, and a skilful engineer, to know all the powers of artillery, to understand the attack and defence of fortified places, in all its different branches; how to dispose of the artillery in the day of battle to the best advantage; to conduct its march and retreat; as also to be well acquainted with all the numerous apparatus belonging to the train, laboratory, &c.

Major G**ENERAL**, the next officer to the lieutenant general. His chief business is to receive orders from the general, or in his absence from the lieutenant general of the day; which he is to distribute to the brigade-majors, with whom he is to regulate the guards, convoys, detachments, &c. On him the whole fatigue and detail of duty of the army roll. It is the major general of the day who is charged with the encampment of the army, who places himself at the head of it when it marches, who marks out the ground of the camp to the quarter-master-general, and who places the new guards for the safety of the camp.

The day the army is to march, he dictates to the field officers the order of the march, which he has received from the general, and on other days gives them the parole.

In a fixed camp he is charged with the foraging, with reconnoitring the ground for it, posting the escorts, &c.

In sieges, if there are two separate attacks, the second belongs to him; but if there be only one, he takes either from the right or left of the attack, that which the lieutenant general has not chosen.

When the army is under arms, he assists the lieutenant general, whose orders he executes.

If the army marches to an engagement, his post is at the head of the guards of the army, until they are near enough to the enemy to rejoin their different corps; after which he retires to his own proper post; for the major generals are disposed on the order of battle as the lieutenant generals are, to whom however, they are subordinate, for the command of their divisions. The major general has one aid-de-camp and one brigade major.

Brigadier G**ENERAL**, is the next rank to that of major general, being superior to all colonels, and having frequently a separate command.

G**ENERAL** *of a district*, a general officer who has the charge and superintendance of a certain extent of country, in which troops are encamped, quartered, or cantoned. He is entitled to have three aids-de-camp and one brigade major.

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He receives reports, &c. from the major general, respecting the troops in his district; reviews and inspects them, likewise orders field days of the whole, brigaded, or by separate corps, when and in what part he pleases, making the necessary reports to the war-office, commander in chief, &c.

Colonel General, an honorary title, or military rank, which is bestowed in foreign services. Thus the *prince* of the peace in Spain was colonel general of the Swiss guards.

Brigade major General. As England and Scotland have been divided into different districts, each district under the immediate command of a general officer, it has been found necessary, for the dispatch of business, to establish an office, which shall be solely confined to brigade duties. The first brigade major general was appointed in 1797. Since which period all orders relative to corps of officers, which are transmitted from the commander in chief to the generals of districts, pass through this channel of intermediate communication.

By the British regulations, it is particularly directed, that all general officers commanding brigades, shall very minutely inspect the internal œconomy and discipline of the several regiments under their order. They are frequently to visit the hospitals and guards. On arriving in camp they are never to leave their brigades till the tents are pitched, and the guards posted; they must always encamp with their brigades, unless quarters can be procured for them immediately in the vicinity of their camp. General officers must not at any time change the quarters assigned them, without leave from head quarters.

All general officers should make themselves acquainted, as soon as possible, with the situation of the country near the camp, with the roads, passes, bridges, &c. leading to it; and likewise with the out-posts, that in case they should be ordered suddenly to sustain, or defend any post, they may be able to march without waiting for guides, and be competent, from a topographical knowlege of the country, to form the best disposition for the service. They should instruct their aids-de-camp in these particulars, and always require their attendance when they visit the out-posts.

All general officers, and others in considerable command, must make themselves thoroughly acquainted with the nature of the country, the quality of the roads, every circuitous access through vallies or openings, the relative height of the neighboring hills, and the course of rivers, which are to be found within the space entrusted to their care. These important objects may be attained by maps, by acquired local information, and by unremitting activity and observation. And if it should ever be the fate of a country, to act upon the defensive, a full and accurate possession of all its fastnesses, &c. must give each general officer a decided advantage over the commanding officer of an enemy, who cannot have examined the ground upon which he may be reduced to fight, and must be embarrassed in every forward movement that he makes. Although guides may serve, and ought always to be used in the common operations of marches, there are occasions where the eye and intelligence of the principal officers must determine the movements of troops, and enable them to seize and improve every advantage that occurs as the enemy approaches.

General officers on service abroad, or commanding districts at home, may appoint their own aids-de-camp and brigade majors. The latter, however, are to be considered as officers attached to their several brigades, not personally to the officers commanding them. The former are their habitual attendants and domestic inmates. In the selection of aids-de-camp and brigade majors, too much attention cannot be given to their requisite qualifications; and that general would not only commit an act of injustice against the interests of his country, but deserve the severest censure and displeasure of his soveriegn, who through motives of private convenience, family connexion, or convivial recommendation, could so far forget his duty, as to prefer an unexperienced stripling, to a character marked by a knowlege of the profession, a zeal for the service, and an irreproachable conduct.

In the day of battle the station of a general is with the reserve, where he remains so situated that he can see every thing which is going forward; and by means of his own observation, or through the communications of his aids-de-camp, is enabled to send reinforcements, as the exigencies of the conflict may require.

The celebrated Marshal Saxe has made the following remarks on the necessary qualifications to form a good general. The most indispensible one, according to his idea, is valor, without which all the rest will prove nugatory. The next is a sound understanding with some genius; for he must not only be courageous, but be extremely fertile in expedients; the third is health and a robust constitution.

"His mind must be capable of prompt and vigorous resources; he must have an aptitude, and a talent at discovering the designs of others, without betraying the slightest trace of his own intentions. He must be *seemingly* communicative, in order to encourage others to unbosom, but remain tenaciously reserved in matters that concern his own army; he must, in a word, possess activity with judgment, be able to make a proper choice of his officers, and never deviate from the strictest line of military justice. Old soldiers must not be rendered wretched and unhappy, by unwarrantable promotions, nor must extraordinary talents be kept back to the detriment of the service, on account of mere rules and regulations. Great abilities will justify exceptions; but ignorance and inactivity will not make up for years spent in the profession.

" In his deportment he must be affable, and always superior to peevishness, or ill-humor; he must not know, or at least seem to know, what a spirit of resentment is; and when he is under the necessity of inflicting military chastisement, he must see the guilty punished without compromise or foolish humanity; and if the delinquent be from among the number of his most intimate friends, he must be doubly severe towards the unfortunate man. For it is better, in instances of correction, that one individual should be treated with rigor (by orders of the person over whom he may be supposed to hold some influence,) than that an idea should go forth in the army, of public justice being sacrificed to private sentiments.

" A modern general should always have before him the example of Manlius; he must divest himself of personal sensations, and not only be convinced himself, but convince others, that he is the organ of military justice, and that what he does is irrevocably prescribed. With these qualifications, and by this line of conduct, he will secure the affections of his followers, instil into their minds all the impulses of deference and respect; he will be feared, and consequently obeyed.

" The resources of a general's mind are as various as the occasions for the exercise of them are multiplied and chequered; he must be perfectly master of the art of knowing how to support an army in all circumstances and situations, how to apply its strength, or be sparing of its energy and confidence; how to post all its different component parts, so as not to be forced to give, or receive battle in opposition to settled plans. When once engaged, he must have presence of mind enough to grasp all the relative points of disposition and arrangement, to seize favorable moments for impression, and to be thoroughly conversant in the infinite vicissitudes that occur during the heat of a battle; on a ready possession of which its ultimate success depends. These requisites are unquestionably manifold, and grow out of the diversity of situations, and the chance medley of events that produce their necessity.

" A general to be in perfect possession of them, must on the day of battle be divested of every thought, and be inaccessible to every feeling, but what immediately regards the business of the day; he must reconnoitre with the promptitude of a skilful geographer, whose eye collects instantaneously all the relative portions of locality; and feels his ground as it were by instinct; and in the disposition of his troops, he must discover a perfect knowlege of his profession, and make all his arrangements with accuracy and dispatch. His orders of battle must be simple and unconfused, and the execution of his plan be as quick as if it merely consisted in uttering some few words of command; as, *the first line will attack! the second will support it! or such a battalion will advance and support the line.*

" The general officers that act under such a general, must be ignorant of their business indeed, if, upon the receipt of these orders, they should be deficient in the immediate means of answering them, by a prompt and ready co-operation. So that the general has only to issue out directions according to the growth of circumstances, and to rest satisfied, that every division will act in conformity to his intentions; but if, on the contrary, he should so far forget his situation as to become a drill serjeant in the heat of action, he must find himself in the case of the fly in the fable, which perched upon a wheel and foolishly imagined, that the motion of the carriage was influenced by its situation. A general, therefore, ought on the day of battle to be thoroughly master of himself, and to have both his mind and his eye rivetted to the immediate scene of action. He will by these means be enabled to see every thing; his judgment will be unembarrassed, and he will instantly discover all the vulnerable points of the enemy. The instant a favorable opening offers, by which the contest may be decided, it becomes his duty to head the nearest body of troops, and, without any regard to personal safety, to advance against his enemy's line.—[By a ready conception of this sort, joined to a great courage, general Desaix determined the issue of the battle of Marengo.] It is, however, impossible for any man to lay down rules, or to specify, with accuracy, all the different ways by which a victory may be obtained. Every thing depends upon variety of situations, casualties of events, and intermediate occurrences which no human foresight can positively ascertain, but which may be converted to good purposes by a quick eye, a ready conception, and a prompt execution.

" Prince Eugene was singularly gifted with these qualifications, particularly with that sublime possession of the mind, which constitutes the essence of a military character.

" Many commanders in chief have been so limited in their ideas of warfare, that when events have brought the contest to issue, and two rival armies have been drawn out for action, their whole attention has devolved upon a straight alignement, an equality of step, or a regular distance in intervals of columns. They have considered it sufficient to give answers to questions proposed by their aids-de-camp, to send orders in various directions and to gallop themselves from one quarter to another, without steadily adhering to the fluctuations of the day, or calmly watching for an opportunity to strike a decisive blow. They endeavor, in fact, to do every thing, and thereby do nothing. They appear like men, whose presence of mind deserts them the instant they are taken out of the beaten track, or are reduced to supply unexpected calls by uncommon exertions; and from whence continues the same sensible writer, do these contradictions arise? from an ignorance of those high qualifications without which the mere routine of duty, methodical arrangement, and studied discipline must fall to the ground, and defeat themselves. Many officers spend their whole lives in putting a few regiments through a regular set of manœuvres; and having done so, they vainly imagine, that all the science of a real military man consists in that acquirement. When, in process of time, the command of a large army falls to their lot, they are manifestly lost in the magnitude of the undertaking, and from not knowing how to act as they ought, they remain satisfied with doing what they have partially learned.

"Military knowlege, as far as it regards a general or commander in chief, may be divided into two parts, one comprehending mere discipline and settled systems for putting a certain number of rules into practice; and the other originating a sublimity of conception, that method may assist, but cannot give.

"If a man be not born with faculties that are naturally adapted to the situation of a general, and if his talents do not fit the extraordinary casualties of war, he will never rise beyond mediocrity.

"It is, in fact, in war as it is in painting, or in music. Perfection in either art grows out of innate talents, but it never can be acquired without them. Study and perseverance may correct ideas, but no application, no assiduity will give the life and energy of action; those are the works of nature.

"It has been my fate (observes the Marshal, to see several very excellent colonels become indifferent generals. I have known others, who have distinguished themselves at sieges, and in the different evolutions of an army, lose their presence of mind and appear ignorant of their profession, the instant they were taken from that particular line, and be incapable of commanding a few squadrons of horse. Should a man of this cast be put at the head of an army, he will confine himself to mere dispositions and manœuvres; to them he will look for safety; and if once thwarted, his defeat will be inevitable, because his mind is not capable of other resources.

"In order to obviate in the best possible manner, the innumerable disasters which must arise from the uncertainty of war, and the greater uncertainty of the means that are adopted to carry it on, some general rules ought to be laid down, not only for the government of the troops, but for the instruction of those who have the command of them. The principles to be observed, are: that when the line or the columns advance, their distances should be scrupulously observed; that whenever a body of troops is ordered to charge, every proportion of the line should rush forward with intrepidity and vigor; that it openings are made in the first line it becomes the duty of the second instantly to fill up the chasms.

"These instructions issue from the dictates of plain nature, and do not require the least elucidation in writing. They constitute the A, B, C, of soldiers. Nothing can be more simple, or more intelligible; so much so, that it would be ridiculous in a general to sacrifice essential objects in order to attend to such minutiæ. His functions in the day of battle are confined to those occupations of the mind, by which he is enabled to watch the countenance of the enemy, to observe his movements, and to see with an eagle's, or a king of Prussia's eye, all the relative directions that his opponents take. It must be his business to create alarms and suspicions among the enemy's line in one quarter, whilst his real intention is to act against another; to puzzle and disconcert him in his plans; to take advantage of the manifold openings, which his feints have produced, and when the contest is brought to issue, to be capable of plunging with effect, upon the weakest part, and of carrying the sword of death where its blows is certain of being mortal. But to accomplish these important and indispensible points, his judgment must be clear, his mind collected, his heart firm, and his eyes incapable of being diverted, even for a moment, by the trifling occurrences of the day.

"I am not, however, an advocate for pitched battles, especially at the commencement of a war. *A skilful general might, I am persuaded, carry on a contest between two rival nations during the whole of his life, without being once obliged to come to a decisive action.* Nothing harrasses and eventually distresses an enemy so much as this species of warfare. He must, in fact, be frequently attacked, and by degrees, be broken and unnerved; so that in a short time he will not be able to shew himself.

"It must not generally be inferred from this opinion, that when an opportunity presents itself, whereby an enemy may be crushed at once, the attack should not be made, or that advantage should not be taken of the errors he may commit; all I mean to prove is, that war can be carried on without leaving any thing to chance; and in this consists the perfection and highest point of ability belonging to a general. But when a battle is risked, the triumphant party ought well to know all the advantages which may be derived from his victory. A wise general, indeed, will not remain satisfied in having made himself master of the mere field of battle. This, I am sorry to observe, is too often the custom; and, strange to say, that custom is not without its advocates.

"It is too much the practice of some governments, and as often the custom of generals, to follow the old proverb, which says, *that in order to gain your ends, you must make some sacrifices, and even facilitate the retreat of your enemy.* Nothing can be more impolitic or more absurd. An able surgeon might as well tamper with a mortification, and by endeavoring to save an useless limb, run the hazard of destroying all the vital parts.

"An enemy, on the contrary, ought to be vigorously pushed, harrassed night and day, and pursued through every winding he can make. By a conduct of this sort, the advancing army will drive him from all his holds and fastnesses, and the conclusion of his brilliant retreat, will ultimately turn out a complete and total overthrow. Ten thousand well trained and disciplined troops, that are sent forward from the main army, to hang upon the rear of a retiring enemy, will be able to destroy an army of an hundred thousand men, when that army has once been forced to make retrogade movements. A want of confidence in their generals, added to many other disheartening circumstances, will naturally possess the minds of the latter, while implicit faith und warm affection must influence the former. A first defeat well followed up, almost always terminates in a total rout, and finishes the contest. But some generals do not wish to bring war to a speedy issue. Public misfortunes too frequently produce private emoluments, and the accumulation of the latter is too endearing to suffer itself to be superseded by the former."

In order to substantiate what he thus advances with much good sense, the Marshal cites the following particular instance, from among an infinity of others.

"When the French army, at the battle of Ramillies, was retiring in good order over an eminence that was rather confined, and on both sides of which there were deep ravines, the cavalry belonging to the allies followed its track leisurely, without even appearing to wish to harrass or attack its rear. The French continued their march with the same composure; retreating upon more than twenty lines, on account of the narrowness of the ground.

"On this occasion, a squadron of English horse got close to two French battalions, and began to fire upon them. The two battalions, naturally presuming that they were going to be attacked, came to the right about, and fired a volley at the squadron. What was the consequence? the whole of the French army took to its heels; the cavalry went off full gallop, and all the infantry, instead of patiently retiring over the heights, threw itself into the ravines in such dreadful disorder, that the ground above was almost instantly abandoned, and not a French soldier was seen upon it.

"Let any military man consider this notorious event, and then praise the regularity of a retreat and the prudent foresight of those who, after an enemy has been vanquished in the field, relax in their exertions, and give him time to breathe. I do not, however, pretend to maintain, that all the forces of a victorious army should be employed to follow up the pursuit; but I am decidedly of opinion, that large bodies should be detached for that purpose, and that the flying enemy should be annoyed as long as the day lasts. This must be done in good order. And let it be remembered, that when an enemy has once taken to his heels in real earnest, you may drive him before you by the mere noise of empty bladders.

"If the officer who is detached in pursuit of an enemy, begins to manœuvre after prescribed rules and regulations, and operate with slowness and precaution, he had better be recalled; for the sole purpose of his employment is to push on vigorously, to harrass and distress the foe. Every species of evolution will do on this occasion; if any can be defective, the regular system might prove so.

"I shall conclude these observations by saying, that all retreats depend wholly upon the talents and abilities of generals, who must themselves be governed by circumstances and situations; but I will venture to assert, that no retreat can eventually succeed, unless it be made before an enemy who acts with extreme caution; for if the latter follow up his first blow, the vanquished army must soon be thrown into utter confusion."

These are the sentiments of Marshal Saxe, as far as they relate to the qualifications which the general of an army should indispensibly possess. And no man we are persuaded was better enabled to form an opinion on so important a subject; for as baron Espagnac has justly observed in his *Supplément aux Rêveries de ce Mar*, p. 166, he possessed uncommon courage, was fertile in expedients and resources; he knew how to distinguish and to make use of the abilities of individuals, was unshaken in his determinations; and when the good of the service required chastisement or severity, was not influenced by private feelings, or hurried away by a sanguinary temper; he was uncommonly attentive to his men, watchful of their health, and provident to supply their wants; sparing of their blood in the day of battle, and always inspiring them, by the liveliness of his mind, tempered by experience, with confidence and attachment to his measures. He knew the cast of each man's character, particularly so of his officers; and whilst he directed the former with consummate knowlege and consequent success, he never lost sight of the merits of the latter, when they cooperated with his designs. If the natural vivacity of his mind sometimes led him into temporary neglect, good sense and a marked anxiety to be just, soon made amends for apparent slights, by rendering the most important services; he was ingenious and subtle in all his manœuvres before an enemy, skilful in his choice of camps, and equally intelligent in that of posts; he was plain in his instructions previous to an engagement, simple in his disposition of the order of battle; and he was never known to lose an opportunity, through the want of prompt decision, whereby a contest might be ended by a bold and daring evolution. When it appeared necessary to give weight to his orders, and to turn the balance of fortune by personal exposure, no man became less fearful of his own destiny, than Marshal Saxe. On these occasions he was daring to an extreme, heedless of danger, but full of judgment, and a calm presence of mind. Such, in our humble opinion, are the outlines of a *real* general, how well they were exemplified and filled up by the subject of this article, time and the concurring testimony of events have proved.

General's *Guard*. It was customary among the French, for the oldest regiment to give one captain, one lieutenant, one ensign, two serjeants, and fifty privates, as a general's guard. Whenever the marshals of France were on service under the immediate orders of the king, or of the princes belonging to the royal household, they always retained the rank of general.

General *d'armée*, Fr. the commander in chief of any army.

Battre la General, *Fr.* to beat the general. See Drum.

General *court-martial*. See Courts martial.

General *formations* of the battalion, are from line into column, and from column into line by echellon; to either flank, to the front, or on a line oblique to any given point front or rear.

General, is also used for a particular beat of the drum. See Drum.

GENETTE, *Fr.* a particular sort of snaffle, which is used among the Turks; it resembles a large ring, and serves to confine the horse's tongue.

GENIE, *Fr.* The art of engineering. It consists in a knowlege of lines so as to be able to trace out all that is requisite for the attack or defence of places, according to established rules in fortification. Marshal Vauban and the marquis of Louvois, have particularly distinguished themselves in this art.

GENIUS, in a military sense, a natural talent or disposition to every kind of warlike employment, more than any other; or the aptitude a man has received from nature to perform well, and easily, that which others can do but indifferently, and with a great deal of pains.

From the diversity of genius, the difference of inclination arises in men whom nature has had the precaution of leading to the employment for which she designs them, with more or less impetuosity, in proportion to the greater or lesser number of obstacles they have to surmount, in order to render themselves capable of answering this occasion. Thus the inclinations of men are so very different, because they follow the same mover, that is the impulse of their genius. This is what renders one officer more pleasing, even though he trespasses against the rules of war; while others are disagreeable notwithstanding their strict regularity.

GENOUILLIERE, *Fr.* the lower part of the embrasure of a battery. The genouilliere is about 2 1-2 or 3 French feet high from the platform to the opening of the embrasure. It lies immediately under the arch of the fortification. Its thickness, which usually consists of fascines well put together, is of the same dimensions that merlons bear; namely from 18 to 22 feet. The term *genouilliere* is derived from *genou*, signifying the knee, to the height of which it is generally raised.

GENS, *Fr.* a word in much desultory use among the French, signifying in a general acceptation of it, folks, people, servants, soldiers, &c

Gens *d'armes*. See Gendarmes.

Gens *de guerre*, Fr. men attached to a military profession.

Mes Gens, *Fr.* an affected phrase, which was formerly used among the French, to signify their servants or attendants. It seems to have been an arrogant and foolish imitation of *mon peuple*, my *people*. During the monarchy of France, this term was in much vogue at Paris, and was afterwards adopted by almost all the *petits maitres*, or coxcombs belonging to the church, state, and army.

Gens *de sac et de corde*, Fr. an opprobrious term which the French apply to men that deserve chastisement. In former times, the cord or rope, and the sack, were the common instruments and means of punishment. The ropes served to hang up malefactors: and the sack was used to contain their bodies when it was ordained that they should be thrown into a river.

Gens *de mer*, Fr. sea-faring men.

Gens *de l'équipage*, Fr. men belonging to the train of artillery.

Gent. *Fr.* Nation. It is only used in poetry, viz. *La gent, qui porte le Turban*. The Turkish Nation. In the plural number it is only accepted according to the following significations.

Le droit des Gens, Fr. the rights of nations.

Violer le droit des Gens, Fr. to infringe or violate the rights of nations.

Respecter le droit des Gens, Fr. to respect the rights of nations.

Un traité du troit des Gens, Fr. a treatise on the rights of nations.

The following phrases are in familiar use among the French, viz.

Gens *de marque*, Fr. men of distinction.

Gens *de condition*, Fr. men of condition.

Gens *d' honneur*, Fr. men of honor.

Gens *de qualité*, Fr. men of fashion, or quality.

Gens *de cœur*, Fr. men of spirit.

Gens *d'epée*, Fr. this term is used among the French, to distinguish officers, gentlemen, &c. who wear swords, from those who do not, particularly so in opposition to *gens de la robe*, or lawyers.

Gens *de main*, Fr. executive characters.

Gens *de service*, Fr. useful men, persons of exertions.

Gens *de pied*, Fr. The same as *fantassins*, foot soldiers, or men who serve on foot.

Gens *de cheval*, Fr. cavalry, or men who serve on horseback.

Mille Gens, *cent mille gens*, Fr. signifies any considerable number of men.

Gens, Fr. this word is likewise used to distinguish bodies of men that are in opposition to each other, viz.

Nos Gens *ont battu les ennemis*, Fr. our men, or people have overcome the enemy.

Nos Gens *ont été battus*, Fr. our men or people have been beaten.

Je craignois que ce ne fussent des ennemis, et c'étoient de nos Gens, Fr. I was apprehensive that they were our enemies, but they proved to be our own people.

Nos Gens *battirent les vôtres*, Fr, our men beat your's.

Gens, *Fr.* when followed by the preposition *de*, and by a substantive, which points out any particular profession, trade, &c. signifies all those persons that belong to one nation, one town, &c. or who are of one specific profession or calling, as

Les Gens *d'église*, Fr. churchmen.

Les Gens *de robe*, Fr. lawyers or gentlemen of the long robe.

Les Gens *de finance*, Fr. men concerned in the distribution of public money.

Les Gens *de loi*, Fr. means generally all persons who have any connection with the law in the way of profession.

Les Gens *du roi*, Fr. Crown lawyers.

GENTILHOMMES *de la garde*, commonly called *Au bec de corbin*, or the battle axe. This company went through many alterations during the monarchy of France. During the last years of that government, it consisted of 200 guards under the command of a captain, a lieutenant, and an ensign. The captain had the power of giving away the subaltern commissions, and had moreover the entire management of the rest; every vacancy being in his gift. They marched in file, each holding his battle-axe, before the king on days of public ceremony. These were chiefly at the coronation, and the marriage of the king, or at the reception of the knights of the Holy Ghost.

When the company was first raised, its particular duty was to attend the king's person, and to be constantly near him on the day of battle.

GENTILHOMME *à drapeau établie dans chaque compagnie des gardes Françoises*, Fr. under the old French government, this person ranked as *officier en second*. He did duty in common with the ensigns of the French guards, and took precedence immediately under them. His name always stood upon the muster roll, but his appointment was purely honorary, as he did not receive any pay; his tour of duty in mounting guards, went with that of the ensigns, he was obliged to be present at all field days, and could not absent himself without leave.

Gentilshommes *pensionnaires*, Fr. Gentlemen pensioners. See Pensioners.

GEODOESIA, GEODESIE, Fr. that part of practical geometry, which contains the doctrine or art of measuring surfaces and finding the contents of all plain figures. Among the French *géodesie* means likewise the division of lands. See Surveying.

GEOGRAPHY is the doctrine or knowlege of the terrestrial globe; or the science that teaches and explains the state of the earth, and parts thereof that depend upon quantity; or it is rather that part of mixed mathematics, which explains the state of the earth, and of its parts depending on quantity, viz. its figure, magnitude, place, and motion, with the celestial appearances, &c. In consequence of this definition, geography should be divided into general and special, or universal and particular.

By universal Geography, is understood that part of the science which considers the whole earth in general, and explains its properties without regard to particular countries. This division is again distinguished into three parts, absolute, relative, and comparative. The absolute part respects the body of the earth itself, its parts and peculiar properties; as its figure, magnitude, and motion; its lands, seas, and rivers, &c. The relative part accounts for the appearances and accidents that happen to it from celestial causes; and lastly, the comparative contains an explanation of those properties which arise from comparing different parts of the earth together.

Special or *particular* GEOGRAPHY is that division of the science which describes the constitution and situation of each single country by itself; and is twofold, viz. chorographical, which describes countries of a considerable extent; or topographical, which gives a view of some place, or small tract of land. Hence the object or subject of geography is the earth, especially its superficies and exterior parts.

The properties of GEOGRAPHY are of three kinds, viz. celestial, terrestrial, and human. The celestial properties are such as affect us by reason of the apparent motion of the sun and stars. These are 8 in number.

1. The elevation of the pole, or the distance of a place from the equator.

2. The obliquity of the diurnal motion of the stars above the horizon of the place.

3. The time of the longest and shortest day.

4. The climate and zone.

5. Heat, cold, and the seasons of the year; with rain, snow, wind, and other meteors.

6. The rising, appearance, and continuance of stars above the horizon.

7. The stars that pass through the zenith of a place.

8. The celerity of the motion with which, according to the Copernican hypothesis, every place constantly revolves.

The terrestrial properties are those observed in the face of the country, and are 10 in number.

1. The limits and bounds of each country.

2. figure;
3. magnitude;
4. Its mountains;
5. waters, viz. springs, rivers, lakes, and bays;
6. woods and deserts.

7. The fruitfulness and barrenness of the country, with its various kinds of fruits.

8. minerals and fosils;
9. The living creatures there;
10. longitude and latitude of the place.

The third kind of observations to be made in every country is called human, because it chiefly regards the inhabitants of the place. It consists of 10 specific branches.

1. The stature, shape, color, and the length of their lives; their origin, meat and drink.

2. Their arts, and the profits which arise from them, with the merchandize they barter one with another.

3. Their virtues and vices, learning, capacities, and schools.

4. Their ceremonies at births, marriages, and funerals.

5. The language which the inhabitants use.

6. political government.
7. religion and church government.
8. Their cities and famous places.
9. remarkable histories and antiquities.

10. Their famous men, artificers, and inventions of the natives.

These are the three kinds of occurrences to be explained in special geography.

The principles of GEOGRAPHY, or those from which arguments are drawn for the proving of propositions in that science, are, according to the best authors, of three sorts.

1. Geometrical, arithmetical, and trigonometrical propositions.

2. Astronomical precepts and theorems.

3. Experience, being that upon which the greatest part of geography, and chiefly the special is founded.

In proving geographical propositions, we are to observe, that several properties, and chiefly the celestial, are confirmed by proper demonstrations; being either grounded on experience and observation, or on the testimony of our senses: nor can they be proved by any other means. There are also several propositions proved, or rather exposed to view, by the terrestrial globe, or by geographical maps.

Other propositions cannot be so well proved, yet are received as apparent truths. Thus, though we suppose all places on the globe, and in maps, to be laid down in the same order as they are really on the earth; nevertheless, in these matters, we rather follow the descriptions that are given by geographical writers.

GEOGRAPHY is very ancient, at least the special part thereof; for the ancients scarce went beyond the description of countries. It was a constant custom among the Romans, after they had conquered or subdued any province, to have a map or printed representation thereof, carried in triumph and exposed to the view of the spectators. Historians relate that the Roman senate, about 100 years before Christ, sent geographers into divers parts to make an exact survey and mensuration of the whole globe; but they scarcely ever saw the 20th part of it.

Before them, Necho, king of Egypt, ordered the Phœnicians to make a survey of the whole coast of Africa, which they accomplished in 3 years. Darius procured the Ethiopic sea, and the mouth of the Indus, to be surveyed; and Pliny relates, that Alexander, in his expedition into Asia, took two geographers to measure and describe the roads; and that from their itineraries, the writers of the following ages took many particulars. Indeed this may be observed, that whereas most other arts and sciences are sufferers by war, geography, artillery, mining, and fortification, alone have been improved thereby. Geography, however, must have been exceedingly defective, as a great part of the globe was then unknown, particularly all America, the northern parts of Europe and Asia, with the Australasia, and Magellanica; and they were also ignorant of the earth's being capable to be sailed round, and of the torrid zone being habitable, &c.

The honor of reducing geography to art and system, was reserved for Ptolemy; who, by adding mathematical advantages to the historical method in which it had been treated of before, has described the world in a much more intelligible manner: he has delineated it under more certain rules, and by fixing the bounds of places from longitude and latitude, has discovered other mistakes, and has left us a method of discovering his own.

GEOLIER *des prisons militaires*, Fr. the superintendant or head jailor of military prisons. Under the old French government, this person had a right to visit all prisoners that were not confined in dungeons. He could order provisions, wood, and coal to be conveyed to them; but he had not the power of permitting women to visit or have any intercourse with the soldiers; and when their period of imprisonment expired, he could not detain them on account of debts contracted for food, lodging, or fees, &c. Half of the prisoner's subsistence for one day, according to his rank, was given on his release.

GEOMETRICAL *elevations*, just dimensions of [illegible] proportionate to a given scale, &c. See ORTHOGRAPHY.

GEOMETRIE, *Fr.* Geometry.

GEOMETRIE *composée*, Fr. compound geometry, which consists in the knowledge of curved lines, and of the different bodies produced by them. The immediate object or intent of compound geometry is confined to conic sections, and to lines of that species.

GEOMETRIE *sublime et transcendante*, Fr. these terms have been applied by the French to the new system of geometry, which was produced by Leibnitz, and Newton, when they found out the method of calculating *ad infinitum.*

GEOMETRY, originally signified no more than the art of measuring the earth, or any distance or dimensions in it; but at present it denotes the science of magnitude in general; comprehending the doctrine and relations of whatever is susceptible of augmentation or diminution, considered in that light. Hence, to geometry may be referred the consideration not only of lines, surfaces, and solids; but also of time, velocity, number, weight, &c.

Plato thought the word geometry an improper name for this science, and accordingly substituted in its place the more extensive one of mensuration; and after him, others gave it the name of pantometry, as demonstrating not only the quantities of all manner of magnitudes, but also their qualities, ratios, positions, transformations, relations, &c. and Proclus calls it the knowlege of magnitudes and figures, and their limitations; also of their motions and affections of every kind.

Origin and progress of GEOMETRY. This science had its rise in Asia, the invention, which at first consisted only in measuring the lands, that every person might have what belonged to him, was called geometry, or the art of measuring land; and it is probable, that the draughts and schemes which they were annually compelled to make, helped them to discover many excellent properties of these figures; which speculation has continued gradually to improve to this day.

From Asia it passed into Egypt, and thence into Greece, where it continued to receive improvement from Thales, Pythagoras, Archimedes, Euclid, &c. The elements of geometry, written by Euclid in 15 books, are a most convincing proof to what perfection this science was carried among the ancients. However, it must be acknowleged, that it fell short of modern geometry, the bounds of which, by the inventions of fluxions, and the discovery of the almost infinite order of curves are greatly enlarged.

Division of GEOMETRY. This science is usually distinguished into elementary, and higher or sublime geometry. The first, or elementary geometry, treats of the properties of right lines, and of the circle, together with the figures and solids formed by them. The doctrine of lines comes first, then that of surfaces, and lastly that of solids. The higher geometry comprehends the doctrine of conic sections, and numerous other curves.

Speculative and practical GEOMETRY. The former treats of the properties of lines and figures, as Euclid's Elements, Apollonius's Conic Sections, &c. and the latter shews how to apply these speculations to the use of mensuration, navigation, surveying, taking heights and distances, gauging, fortification, gunnery, &c.

Usefulness of GEOMETRY. Its usefulness extends to almost every art and science. By the help of it, astronomers turn their observations to advantage: regulate the duration of times, seasons, years, cycles, and epochs; and measure the distance, motion, and magnitudes of the heavenly bodies. By it geographers determine the figure and magnitude of the whole earth; and delineate the extent and bearings of kingdoms, provinces, harbors, &c. It is from this science also that architects derive their just measure and construction of public edifices, as well as of private houses.

It is by the assistance of geometry that engineers conduct all their works, take the situation and plans of towns, the distances of places, and the measure of such things as are only accessible to the sight. It is not only an introduction to fortification, but highly necessary to mechanics. On geometry likewise depends the theory of gunnery, mining, music, optics, perspective, drawing, mechanics, hydraulics, pneumatics, &c.

We may distinguish the progress of geometry into three ages; the first of which was in its meridian glory at the time when Euclid's Elements appeared; the second beginning with Archimedes, reaches to the time of Descartes; who by applying algebra to the elements of geometry, gave a new turn to this science, which has been carried to its utmost perfection by our learned countryman Sir Isaac Newton, and by the German philosopher Leibnitz.

GEORGE, *or knight of St. George*, has been the denomination of several military orders. See Garter.

GERBE, Fr. means literally a sheaf, but it here signifies a sort of artificial firework, which is placed in a perpendicular manner, and resembles a sheaf. See Jets *de feu*.

Gerbe likewise means the tithe which was formerly paid to the French curates.

Faire Gerbe *de foarre à dieu*, Fr. a figurative expression, signifying, that the farmer made up the worst sheaf he could for the parson; filling it principally with straw instead of good ears of corn.

GERMS, small coasting vessels employed by the French, to keep up an intercourse with Egypt.

GESE, Fr. a weapon used in former times.

Geses and *Materes* were adopted by the Allobroges (a body of ancient Gauls so called) independently of the broad cut and thrust sword, which the Swiss still wear. These instruments were only one cubit long; half the blade was nearly square, but it terminated in a round point that was exceedingly sharp. Virgil in his Æneid calls this species of blade, *alpin*, meaning, no doubt, to convey, that it was in general use among the neighboring inhabitants of the *Alps*. Not only the Romans, but the Greeks received it into their armies. The former retained the full appellation and called it *gése*, but the latter corrupted it into *ysse*. This is the only weapon with which those soldiers were armed that escorted malefactors, who were condemned to death, to the place of execution. The term *gese* was also applied to a sort of a javelin.

GESSATES, a people of whom Polybius speaks in his history of the ancient Gauls, and who inhabited the countries lying adjacent to the alps, and to the river Rhone. According to some writers, they were so called because they constantly wore *geses*. The gese is said to have been a dart which the ancient Gauls exclusively used, and which some authors since confounded with the *pertuisane* or *partisan*, a sort of halbert, called by others a *javelin*. This word was used in Provence, as late as the year 1300; for in the inventory which was taken of the goods, furniture, &c appertaining to the Templars, we find *gessus* or *gesus* particularly specified in the list of weapons and iron instruments, which was understood to mean *gese*, and under that appellation was deposited in the king's archives at Aix. See Boucher, *Hist. Prov.* Liv. ii. c, 4. p. 82. This same author further asserts, that the *Gési*, and the *Gessates* took their names from that weapon. He quotes Julius Cæsar's account of the word *gesi* in confirmation of his own opinion. Many authors have mentioned the same term: among others, Justus, Lipsus, Hugo, Cheves, Vossius, &c.

Gessate *ou* Gesate, *Fr.* a knight among the ancient Gauls, who took delight in war, and frequently volunteered his services beyond the boundaries of his native country. Whenever a neighboring country made a levy of men, it was usual for the gessates to accompany the troops, from a conviction that it would be dishonorable in them to remain inactive at home. These adventurers, or knights-errant, were called gessates, either on account of the gessus or large dart, which they carried, or, as Polybius imagines, on account of the subsistence which was paid them, and was called by that name.

GESTURE, a motion of the body intended to signify some idea, or passion of the mind. All officers and soldiers who make use of any menacing gesture before a commanding or superior officer, or before a court-martial, are liable to be punished by the laws of war.

GEZE, *Fr.* a rentrant angle, which is made with slate or lead, and forms a gutter between two roofs. It is likewise called *noue*, or pantile.

GHERIAH, a port on the Malabar Mahrattah coast of Hindustan, the capital part of Angria's dominions, which consisted of an extent of coast, from whence this warlike state was a perpetual source of uneasiness to the trading ships of all the European nations in India. It cost the English East-India company 50,000*l*. annually to protect their own ships. Eight or ten grabs, and forty or fifty gallivats, crowded with men, generally composed Angria's principal fleet in 1754, destined to attack ships of force or burthen. The vessel no sooner came in sight of the port or bay where the fleet was lying, than they slipped their cables and put out to sea. If the wind blew, their construction enabled them to sail almost as fast as the wind; and if it was calm, the gallivats rowing towed the grabs: when within cannon shot of the chace, they generally assembled in her wake, and the grabs attacked her at a distance with their prow guns, firing first only at the masts, and taking aim when the three masts of the vessel just opened all together to their view; by which means the shot would probably strike one or other of the three. As soon as the chase was dismasted, they came nearer, and battered her on all sides until she struck: and if the defence was obstinate, they sent a number of gallivats, with two or three hundred men in each, who boarded sword in hand from all quarters in the same instant.

The English trusting to the report of the natives, had until the year 1756, believed Gheriah to be at least as strong as Gibraltar, and like that situated on a mountain which was inaccessible from the sea, for this reason it was resolved to send vessels to reconnoitre it; which service commodore James, in the Protector, with two other ships, performed. He found the enemy's fleet at anchor in the harbor, notwithstanding which, he approached within cannon shot of the fort, and having attentively considered it, returned at the end of December to Bombay, and described the place, such as it truly was, very strong indeed, but far from being inaccessible or impregnable. This place was taken by the English troops under the command of colonel Clive. There were found in it 200 pieces of cannon, six brass mortars, and a great quantity of ammunition, and military and naval stores of all kinds; the money and effects of other kinds, amounted to 1,200,000*l.* sterling. All this booty was divided amongst the captors, without any reserve either for the nation, or the company. In less than a month the English, with their allies the Mahrattas got possession of all the territories wrested from the latter by Angria's predecessors, and which they had for seventy years despaired of ever being able to recover.

GIBERNE, *Fr.* a sort of bag in which the grenadiers held their hand-grenades. It was worn like a powder flask. They likewise carried, independent of this bag, a cartouch box containing 18 or 20 charges.

GIBRALTAR, a strong fortress of Andalusia, in Spain. Gibraltar was formerly thought to be impregnable; but it was taken by Sir George Rooke in 1704, and has remained in the hands of the English ever since. It has been several times attacked by the Spaniards, who have always been unsuccessful. Their last effort to recover it was made September 13th, 1782, with floating batteries, in which were mounted 212 brass cannon and mortars The French united with the Spaniards on this memorable occasion; and the brother to the last king of the French, (then Count D'Artois) commanded the camp of St. Roche, from whence the offensive operations were directed. General Elliot, (afterwards called lord Heathfield) had prepared a great number of red-hot balls against the attack; and these so effectually destroyed the floating batteries, that the Spaniards were greatly annoyed, and relinquished the enterprize. For particulars, see Drinkwater's siege of Gibraltar.

GIN, in military mechanics, is a machine for raising great weights: it is composed of 3 long legs, 2 of which are kept at a proper distance by means of 2 iron bars fixed on one of the legs by a staple passing through a hole at one end: the other end has a hook which enters into a staple fixed into the other leg so as to be taken off or put on at pleasure.

At 3 feet from the bottom is a roller, upon which the cable was wound; and the 3 legs are joined together with an iron bolt, about which they move: to this bolt, is also fixed an iron half-ring to hook on a windlass: when the gin stands upright, so as the legs stand at a proper distance, one end of the cable is fastened to a gun, mortar, or other weight; and the other passes through the pullies and about the roller, which is turned round by means of hand-spikes passing through the holes in the ends of the roller: whilst a man holds the cable tight, the gun is raised to the height required, so that the carriage may be put under it.

GIN *Triangle*—Length of arms of the gin 16 feet 4 1-2 inches. Roller, 6 feet long. Tackle fall, 78 feet of 3 inch white rope. Sling, 6 inch white rope.

The newly constructed gin, by having one half of the roller of a greater diameter than the other, gives a new power, that of elevating or lowering the object in a greater or lesser proportion, according to the end of the cylinder upon which the cable is fixed.

For the different exercises of the gin, see the word EXERCISE.

GINCE, a place in India, situated 35 miles N. W. of Pondichery.

GINJAULS *or* GINGAULS, an East Indian name, signifying large musquets used with a rest, somewhat similar to those invented by Marshal Vauban, for the defence of forts.

GIRANDE, Fr. the chief cluster, or assemblage of an artificial firework, with which a shew or illumination is generally concluded.

A *girande* may be made by uniting several chests or clusters together, and securing with a match of communication, a regular inflammation.

GIRANDOLE, *Fr.* literally, a chandelier; a cluster of diamonds.

GIRANDOLES, *Fr.* circles ornamented with fusees. They are used in fireworks. See SOLEILS *tournans.*

GIROUETTES, *Fr.* Weathercocks, vanes. They are seldom or ever used on shore, except as weathercocks on tops of church-steeples, &c.

Girouette in the singular number, likewise means figuratively light, inconstant, not to be depended upon. As *ce jeune officier est aussi girouette que ce coutume.* This young officer is as light as usual.

GISTES, pieces of wood which are made use of in the construction of platforms to batteries, and upon which the madriers or broad planks are placed.

GLACIS. See Fortification.

Glacis *d'une corniche*, Fr. a waterfall, or insensible slope which is made upon the *cymatium* (a member of architecture, whereof one half is convex, and the other concave) of a cornish.

GLADIATOR, GLADIATEUR, *Fr.* a sword player, a prize fighter. The old Romans were accustomed to make their slaves fight with one another at their public festivals, and the only weapon they used, was a gladine or sword. This barbarous usage was abolished by the emperor Theodoric in the year of Christ 500; but it prevailed among the ancient Britons, and in England to a much later date.

GLAIS *militaire*, *Fr.* a military compliment which was paid to the remains of a deceased general. It consisted in a discharge of ordnance. In a civil sense, it means the chiming of bells at the death of a parish priest.

GLAISE, *Fr.* clay, or potter's earth.

GLAISER, *Fr.* to do over with potter's earth, or clay

GLAIVE, a broad sword, or falchion, anciently so called.

Le Glaive *de la justice*, the sword of justice.

GLAIZE, a kind of halbert, so called by the Saxons.

GLAS, *Fr.* knell.

GLIB *act*, a very ancient act of parliament which directed that the Irish nobility and gentry who were of English or Norman-extraction, should forfeit the privileges of their original country, if they did not shave the upper lip. This act took place when Ireland was first conquered, and its object was to distinguish the descendants of the invaders from the old Irish nobility that traced its origin to Milesius, who wore their hair and their beards very long; hence glib, means loose, flowing.

GLIPHE *ou* **GLYPHE**, *Fr.* signifies generally every species of canal, or hollow, which constitutes any part of ornamental architecture.

Globes *ou ballons d'artifices*, *Fr.* globes or balloons, which are filled with artificial fire. They are used to set fire to an enemy's town or works, &c.

Globes *de feu*, Fr. a cartouch made of mashed paper, which is laid upon a wooden bowl and made perfectly round. It is afterward perforated in several places, and filled with the inflammable composition that is used in the making up of *lances à feu*. The instant it catches, a very bright and lively fire issues out of the several holes.

GLOBE. See Geography.

GLOIRE, *Fr.* an artificial fire-work, which resembles a large sun. It is made by means of an iron wheel containing four circles, each circle diminishing towards the centre, and kept at equal distances from one another. Forty eight *jets de feu*, or fire spouts, are tied to these circles; each jet is twenty French inches long, and there are twelve of them fixed to each of the four circles. The gloire or soleil is placed in the middle of the principal fire-work.

Military **GLORY**, honor, reputation and fame, acquired by military atchievements. That precarious splendor, which plays round the brows of a warrior, and has been collected by hard service, extraordinary genius, and unblemished integrity; but which may desert the greatest hero through one unfortunate failure.

GO. The verb *to go* is variously used in a military sense, as to march in a hostile, or warlike manner.

To Go *off*, implies to depart from any post.

To Go *on*, to make an attack.

To Go *over*, to revolt.

To Go *out*, to go upon any expedition, &c.

To Go *out* is likewise frequently used to signify the act of fighting a duel, as *he went out with a brother officer, and was slightly wounded.*

GOA, a strong town on the Malabar coast, belonging to the Portuguese. The chief trade is in arrack This fort was taken by the English April 2d, 1756.

GOLADAR *or* **GOLDAR**, an East Indian term, signifying a store-keeper, or store-house-keeper.

GOLANDAAZEE, the Indian term for an artillery man.

GOLCONDA, a province in India, formerly comprehending the nabobships of Arcot, Canoul, Cudapa, Rajamandry, and Chicacole.

Golconda, formerly a city and the capital of the province. It stood at the foot of the rock and fortress of the same name; but the city has long since been deserted; and its inhabitants removed to Hyderabad: nevertheless its name is still frequently used in Indostan, when in reality the city of Hyderabad is meant.

GOLDEN *Rock*, a spot near Tritchinopoly in East India, which has been renowned by the victory that was gained by the British troops over the French and their allies in 1753.

GONDECAMA, *Gondegama*, a river in India, which makes the northern boundary of the province of Arcot; Condavir extends between this and the river Kristna.

GONDOLA, *Gondole*, Fr. this word may be taken in two senses, viz. to signify a cup; or a small barge which is flat and long in its construction, and is only moved, or worked by oars. Gondolas are much used upon the canals in Venice; they are extremely remarkable for their shape, and the great swiftness with which they glide through the water. The middle sized ones are about thirty feet long, and are only four feet broad across the middle, gradually tapering towards each end, and rising in two sharp and narrow points to the ordinary height of a man. Upon the prow is fixed an iron of uncommon length, which does not exceed half a finger's breadth in thickness; but which is four fingers broad, and is so disposed as to cut the air. The upper part of this iron which is flatter than the rest, stretches out in the shape of a large hatchet a full foot in length: so that when the gondola is on her way, it seems to menace every thing before it, and to force its passage.

GONDOLIERS, *Gondoliers*, Fr. the men who have the management of the gondolas at Venice, are so called. The equipment of a gondola seldom exceeds two persons, even on board of those barges that belong to the foreign ambassadors.

It sometimes happens that there are four, when persons of distinction go to their country houses. The gondoliers never sit down but row the barge standing upright and push forward. One man always plies in the fore part of the gondola, and the other is at the poop.

GONFALON, } an ensign or standard.
GONFANON, }

GONG, the Persian word for a village.

GONG WALLAS, villagers, the militia in India so called; from *gong*, a village, and *wallas*, a man.

GORGE. See FORTIFICATION.

GORGE, *Fr.* likewise means any hollow between a chain of mountains, that affords a passage into an open country.

GORGE, *Fr.* a sort of concave moulding belonging to ornamental architecture.

GORGERIN, *Fr.* in ancient times, that part of the armor which covered the neck of a man. Hence our word *gorget*.

GORGONS, in military antiquity, a warlike female nation of Lybia, in Africa, who had frequent quarrels with another nation of the same sex, called *Amazons*.

GOTHIC, (*Gothique* Fr.) any thing constructed after the manner of the Goths. Various works and buildings that appear to have been constructed without any particular regard to the rules of art, are so called. All the old cathedrals are in the Gothic taste.

Monsieur de Fenelon has said, that gothic architecture can support an immense vault upon the slightest pillars. The elevation of it is so wonderful, that although it seems ready to tumble, is perforated and full of windows in every part, and stands as it were suspended in the skies, it nevertheless lasts out centuries, and almost always proves more durable than the most regular buildings.

Fronton GOTHIQUE, *Fr.* a gothic pediment. In modern architecture, all circular or triangular gable ends are so called, when they are sculptured, or three leaved.

GOUDRON *ou* GOUDRAN, *Fr.* pitch and tar.

GOUDRONS, *Fr.* small fascines, or faggots which are well steeped in wax, pitch, and glue, and then are lighted for the purpose of setting fire to beams, planks, traverses, galleries, pontoons, &c. They are likewise used in various shapes and ways, to convey light into the ditches, or upon the ramparts.

GOVERNOR *of a fortification*, is, or should be, a person of great military knowlege; and is a very considerable officer, whose authority extends not only over the inhabitants and garrison, but over all troops that may be there in winter quarters, cantonments, or quarters of refreshment.

Duty of a GOVERNOR *in time of peace*, is to order the guards, the rounds, and the patroles; to give the parole and countersign every night after the gates are shut; to visit the posts, to see that both officers and soldiers do their duty, and that every thing goes on regularly and in good order.

Duty of a GOVERNOR *in time of war*. He should consider the place in such a manner, as if the enemy were going to besiege him, not omitting the least thing that may contribute to a long and obstinate defence; he should therefore take particular care to keep the fortifications in good repair; clearing the country round of all hedges, ditches, trees, hollow roads, caverns, and rising grounds, within the reach of cannon shot; not suffering any houses to be built within that distance, nor in general any thing to be done that may favor the approach of an enemy.

He should consider well with himself every minute circumstance that may be of advantage to him during the siege: he should thoroughly examine the several works, and canvas all the different stratagems that may be used, either to defend them, or to give way upon occasion, when overpowered, with an intent to return and dislodge the enemy, after he has got possession of them; in short, how to defend the place entrusted to his care, inch by inch, with the best advantage.

He should consider how, and in what manner, the works defend each other; whether their communications are safe, or liable to be interrupted by the besiegers; how to incommode the enemy when he is at a distance, or to dislodge him when near; whether the ground be proper for mines, and where they should be made; whether any part of the country may not be laid under water, by means of dykes or sluices: if there are any already made, how to keep them in constant repair, or to make new ones if they are wanted; taking care to construct them so that the enemy may not have it in his power to destroy them, either with his cannon or mortars.

If the governor be not sufficiently skilled in the systems of attack and defence, he should frequently converse with the officers of engineers and artillery who understand them; examine the works together, see what may be done to render the defence of the place as long as the circumstances and nature of the works will admit of; and to make it familiar to himself, he should set down a project of defence on paper, and have it canvassed by the most skilful officers of artillery and engineers about him. This must be done in private; that spies or deserters may not discover the weak parts to the enemy. In short, nothing should be neglected on the part of the governor.

He should see that the place be well supplied with ammunition, and wholesome provisions; that the hospitals are in good order, and provided with able physicians and surgeons, as likewise with every thing wholesome and necessary, that the sick and wounded may be well taken care of.

The powder magazines above all things, require his most special care: for though they are built bomb-proof, yet, when a great number of shells fall upon them, they seldom resist their shock; for which reason they should be covered 8 or 10 feet thick with earth, and a layer of fascines, dung and strong planks, laid over them.

GOUJAT, *Fr.* A soldier's boy. It likewise signifies an ignorant good-for-nothing fellow.

GOUINE, a woman of infamous character.

GOURDIN, *Fr.* a flat stick, two fingers in breadth, which was used by the French to punish galley slaves.

GOURGANDINE, *Fr.* a strumpet of the lowest species, a soldier's trull.

GOUVERNAIL, *Fr.* a rudder.

GOUVERNEMENT, *Fr.* anciently meant a certain specific allotment of provinces, towns, &c. under the superintendence and government of one person who received his powers from the king, and had subordinate officers under him. There were twelve governments in France, at the first institution of monarchy, called *grands gouvernemens généraux*, which were specifically noticed in all the general sittings of the kingdom. They were first formed by Hugues Capet, in 987. Previous to the revolution in 1789, they were subdivided into 39 general provincial governments with inferior officers, subject to their jurisdiction; such as governors of towns, and commandants of fortified places. Each governor general was entitled to a guard of cavalry, a certain number of halberdiers and armed men on foot.

GOUVERNEUR *d'une place de guerre*, *Fr.* the governor of a fortified town or place. See *governor of a* FORTIFICATION.

GOWA. A witness is so called in India.

GRABS. Vessels peculiar to the Malabar coast. They have rarely more than two masts, although some have three; those of three are about 300 tons burthen; but the others are not more than 150 tons; they are built to draw very little water, being very broad in proportion to their length, narrowing from the middle to the end, where instead of bows they have a prow, projecting like that of a Mediterranean galley, and covered with a strong deck level with the main deck of the vessel, from which, however, it is separated by a bulk head, which terminates the forecastle. As this construction subjects the grab to pitch violently when sailing against a head sea; the deck of the prow is not enclosed with sides as the rest of the vessel is, but remains bare, that the water which dashes upon it may pass off without interruption. On the main deck under the forecastle are mounted two pieces of cannon nine or twelve pounders, which point forwards through the port holes cut in the bulk head, and fire over the prow; the cannon of the broadside are from six to nine pounders.

GRAFF. See DITCH or MOAT.

GRAIN, *Fr.* A word used in the repairing of damaged cannon.

Mettre un GRAIN *a une piece*, to fill up the touch-hole of a piece of ordnance, the heating it in such a manner, that the metal which is poured in may assimilate and mix. When it becomes cold, a fresh aperture is made or bored.

GRAIS, *Fr.* large stones resembling Scotch pebbles. They are used to pave the high-roads, and streets.

GRAM, the grey peas are called by this name in Hindustan, and is the common food of horses, for which purpose it is previously steept in water.

GRAMEN, grass, in botany.

GRAMINE, *couronne gramine*, Fr. a grass or gramineous crown, which was made among the Romans. See OBSIDIONAL.

GRANADE. False orthography. See GRENADE.

GRANADIER, false orthography. See GRENADIER.

GRAND. This word is frequently used both in French and English as a word of title or distinction; it means great. In French it also means large.

GRAND *division*. The battalion being told off by two companies to each division, is said to be told off in grand divisions; hence grand division firing is, when the battalion fires by 2 companies at the same time, and is commanded by 1 officer only.

GRAND *maitre d'artillerie*, Fr. grand master of the ordnance, &c &c &c.

GRAND *soleil brillant*, Fr. a sun exhibited in artificial fireworks. See GLOIRE.

Grand *Vizir*. See **Vizir**.

GRANITE, *(granit,* Fr.*)* a sort of hard stone which is variegated by spots and streaks, and is rather encrusted. It is very common in Egypt. There is a species of granite, that is of a white and violet color; and another which is green mixed with white. The most ordinary kind has grey and green spots scattered over a greyish white.

Columns 40 feet high have been seen in Egypt which consisted wholly of one piece of granite. The Egyptian Pyramids are made of that marble; such indeed is the quantity said to exist about the country, that some authors imagine the whole extent of its foundation to be a solid rock of granite. The French distinguish this sort of stone by calling it *marbre granit* and *marbre granitelle*. In natural history it is generally called *granita*, being a distinct genus of stones composed of separate and very large concretions rudely compacted together, of great hardness and capable of receiving a very fine and beautiful polish.

GRANOIR, *Fr.* a term used in the French artillery, to signify a sort of sieve, in which there are small round holes for moist powder to be passed through, in order to make the grains perfectly round.

GRAPE *shot*. See **Shot**.

GRAPHOMETER, *(graphometre,* Fr.*)* among surveyors, an instrument for taking angles, and generally called a semi-circle. In mathematics it serves to measure heights and elevations, to raise plans, &c.

GRAPPLING. The French call it grapin, herisson, risson, or harpeau; it is a sort of small anchor, with four or five flukes or arms, commonly used to ride a boat.

Grappling-*irons*, in the art of war, are composed of 4, 5, or 6 branches, bent round and pointed, with a ring at the root, to which is fastened a rope to hold by, when the grapple is thrown at any thing, in order to bring it near, so as to lay hold of it.

Fire **Grappling,** an instrument which nearly resembles the above, only that it is fitted with strong barbs instead of flukes, and is fixed at the yard arms of a fire-ship to grapple her adversary, and set her on fire. The French call this instrument *grapin de brulôt*.

GRAS-*bois*, Fr. in carpentry, a term to signify any piece of wood which is too large to fit the place it was intended to fill, and which must necessarily be diminished. Hence the expression *démaigrir*, to thin.

GRASS, *(gramen,)* in botany a general name for most of the herbaceous plants used in feeding cattle.

Grass *plats*, green walks which for the most part are made by laying turfs or green sods.

GRATICULER, *Fr.* to divide with a pencil on a sheet of paper, any design or drawing into small equal squares, in order to reduce the original sketch or picture, or to enlarge it by the same process. This word is derived from the Italian, *graticola*, a gridiron.

GRATIFICATION, *Fr.* In a general acceptation of the term, this word meant, among the French, certain rewards which generals gave to the troops, after a severe engagement, in testimony of their valor and good conduct. These rewards were distributed according to rank. This custom was prevalent in the most ancient times. According to Vegetius, all monies distributed by the Romans, as military gratifications or rewards, were deposited in the ensign or standard-bearer's hands, to be occasionally given to the soldiers. Sometimes the generals gave directions, that a certain proportion should be sequestered or put apart. By degrees a fund was collected; and the temptations to desert lost their influence in the super or attachment which every soldier felt to his standard, whose bearer was the trustee of his little property, and to whom he was consequently bound by one of the most powerful ties of the human heart—*self interest*.

By *gratification* was likewise meant the accumulation of a certain sum, which was deposited for the specific purpose of burying a deceased soldier.

Gratification signified, among the French, in a more extended sense of the word, a public reward given to a body of soldiers on the recommendation of a general, for some signal act of bravery in the day of battle. When this happened the soldiers had a certain sum of money distributed amongst them, and the officers received annual pensions.

Gratification likewise means a certain allowance in money which is made to prisoners of war. The British officers in France have been allowed 6*d*. per day, and the non-commissioned and soldiers 1 1-2*d*. the officers have also 1*s*. 6*d* in lieu of rations.

GRATTER *un Vaisseau*, Fr. to clean, or careen a ship.

Gratter *en maconnerie*, Fr. to restore the original appearance of a wall or building by grating the superficies with a trowel, or any other iron instrument.

GRAVEURS, *Fr.* Persons employed and paid by the founders of cannon for repairing damaged pieces of artillery. Some individual, however, was distinguished by the name of *Graveur de l'Artillerie*, Engraver to the Artillery, and was permitted, by the Grand Master of the Ordnance, to exhibit over his shop-door the arms of the royal artillery.

GRAVITY.—*Table of the Specific gravity of several Solid and Fluid bodies.*

Platina	23400
Fine gold	19640
Standard gold	18888
Quick silver	11325
Fine silver	11091
Standard silver	10535

Copper	9000
Copper halfpence	8915
Gun metal	8784
Cast brass	8000
Steel	7850
Iron	7645
Cast iron	7425
Tin	7320
Crystal glass	3150
Marble	2700
Common green glass	2600
Flint	2570
Common stone	2520
Clay	2160
Brick	2000
Common earth	1984
Nitre	1900
Ivory	1825
Brimstone	1810
Solid gunpowder	1745
Sand	1520
Coal	1250
Boxwood	1030
Sea water	1030
Common water	1000
Oak	925
Gunpowder, close stacken	937
Do. in loose heap	836
Ash	800
Maple	755
Elm	600
Fir	550
Charcoal	
Cork	240
Air	1.232

The several sorts of wood are supposed dry.

This table also contains the weight of a cubic foot of each body in avoirdupois ounces; from whence results the following rules:

1. *To find the magnitude of any body from its Weight.*

As the tabular specific gravity of the body,
Is to its weight in avoirdupois ounces,
So is one cubic foot, or 1728 cubic inches,
To its contents in feet or inches respectively.

2. *To find the weight of a body from its magnitude.*

As one cubic foot, or 1728 cubic inches,
Is to the content of the body,
So is the tabular specific gravity
To the weight of the body.

GRAVOIS, *Fr.* rubbish.

GREAT *fortification.* One of the divisions of the first system of M. de Vauban.—It consists in a fortification whose exterior side is from 185 to 260 toises, or from 370 to 520 yards, and is seldom adopted but towards a river or a marsh.

Great *radius.* The [illegible] oblique radius. See Fortification.

GRECIAN *fire, seu Gregeois*, Fr. a sort of artificial fire, which insinuates itself beyond the surface of the sea, and which burns with increased violence when it mixes with that element. Its directions are contrary to the course of natural fire; for the flames will spread themselves downwards, to the right or left, agreeably to the movement that is given. It is composed or made up of naptha, sulphur, bitumen, gum and pitch; and it can only be extinguished by vinegar mixed with urine and sand, or with undressed leather or green hides. Some writers assert, that it was invented by an engineer (belonging to Heliopolis, a town in Syria,) whose name was Gallinicus, and who used it with so much skill and effect during a naval engagement, that he destroyed a whole fleet belonging to the enemy, upon which were embarked 30,000 men. This combustible matter has retained the name of Grecian fire, because the Greeks first practised the invention It is asserted indeed, that the secret of making Grecian fire, which should be unextinguishable, has been long since lost; *we say unextinguishable*, because the ancients did not know, as we do, how to repress or put out the flame.

According to the author of *Oeuvres Militaires*, a powerful composition, which could only be extinguished by strong vinegar (a secret unknown to the ancients) might be made of the following combustible materials: viz. pitch, rosin, tallow, camphor, turpentine, salt of nitre, liquid varnish, oil of sulphur, linseed, rock oil, flax, charcoal finely pulverized; the whole of which being boiled together, and before it grows cold, mixed with quick lime: a consistence is formed that will be susceptible of the most subtle and destructive fire.

GRENADES,
GRANADES or
GRENADOES,
in the art of war, are hollow balls or shells of iron or other metal, about 2 1-2 inches diameter, which being filled with fine powder, are set on fire by means of a small fuse, driven into the fuse-hole, made of well seasoned beech wood, and formerly thrown by the *grenadiers* into places where men stood thick, and particularly into the trenches and other lodgments made by the enemy. As soon as the composition within the fuse gets to the powder in the grenade, it bursts into many pieces, greatly to the injury of all who happen to be in its way. Grenades were first made about the time shells were invented (which see) and first used in 1594. Grenades have much sunk into disuse; but nothing is more effectual than grenades thrown into the midst of the enemy, who have jumped into the ditch. During the siege of Cassel, under the Count de Lippe, in the campaign of 1762, a young engineer undertook to carry one of the outworks, with a much smaller detachment than had before attempted it without success He gained his object with ease, from the use of grenades; which is a proof that they should not be neglected, either in the attack or defence of posts.

Grenade, *grenade*, Fr. There is a

sort of grenade which is thrown out of a mortar.

It is sometimes used for the purpose of annoying the besieging enemy; in which case quantities are rolled down the rampart into the fossé, or ditch, upon the workmen or miners.

A grenade resembles a bomb or shell, with this only difference, that the grenade has not any handles to it.

There are some grenades, called *grenades à main* hand-grenades, whose calibre is equal to that of a four pounder. The charge is from five to six ounces of gunpowder, or thereabouts. They are extremely serviceable on many occasions: but particularly so to throw among the men that are working in the trenches; numbers of whom they must inevitably wound. The vent of a hand-grenade contains about six lines, or half an inch.

The following proportions belonged to grenades, according to their several diameters in former times; they have been much improved.

Grenades whose calibre is equal to that of a 33 pounder, contain about 6 French inches or more diameter, 8 lines in thickness, and 16 pounds in weight.

Grenades whose calibre is equal to that of a 24 pounder, contain 5 French inches 5 lines diameter, six lines in thickness, and 12 pounds in weight.

Grenades whose calibre is equal to that of a 16 pounder, contain 4 French inches 9 lines diameter, 5 lines in thickness and 8 pounds in weight.

Those that weigh 6 pounds, have 3 French inches 5 lines diameter, and are 5 lines thick.

Those that weigh 5 pounds, have 3 French inches 2 1-4 lines diameter, and are 5 lines thick.

Those that weigh 3 pounds, have 2 French inches 8 lines diameter, and are 4 1-2 lines thick

Those that weigh 2 pounds, have 2 French inches 4 lines diameter, and are 4 lines thick.

Those that weigh 1 pound, have 1 French inch ten lines diameter, and are 3 lines thick

Those that weigh three quarters of a pound, have 1 French inch 8 lines diameter, and are 3 lines thick.

Those that weigh half a pound, have 1 French inch 8 lines diameter, and are 3 lines thick.

Those that weigh a quarter of a pound, have 1 French inch 6 lines diameter, and are 2 1-2 lines thick.

These proportions were formerly attended to in the old French service, with occasional deviations from the strict measurement of the lines; as it was supposed to be of little consequence whether the grenades fitted the mortars exactly. It was, indeed, generally thought advisable to adapt their sizes, so that they might be thrown out without the least resistance or compression.

Grenades were directed to be thicker at the breech than elsewhere, in proportion to their several diameters.

Durtubie, in his *Manuel de l'Artilleur*, gives the following succinct account of grenades. That writer observes, "that besides bombs or shells, and howitzers, hollow vessels made of iron in globular shapes, which are called grenades, are frequently used; gunpowder is poured in through the cavity or vent, called in French *lumiere*, into which a fuse loaded with a composition of combustible materials is introduced."

There are two sorts of grenades. Those distinguished by the name of *grenades de rampart*, are rolled from the top of the parapet into the ditch; they are equal in calibre to that of a 33 and a 16 pounder; and they weigh 16, 11, and 8 ounces.

The other species is called *grenades à main*. These are thrown into the covert way, and the trenches, &c. Their calibre is that of a 4 pounder, and they weigh 2 pounds. The ordinary thickness of grenades is four lines throughout.

It will occur to our military readers, that by this account a considerable alteration has taken place in the casting of grenades, as the intermediate differences have been consolidated; hand-grenades, instead of being thicker at the breach, are uniformly of the same consistency. It cannot, however, be thought superfluous to preserve an account of the original dimensions.

GRENADES.—Hand grenades may be thrown to the distance of 13 fathoms. For their dimensions see the word SHELL.

GRENADES *Turques*. Fr. Turkish grenades. A sort of grenade which is made by the Turks. Their grenades are extremely defective, and do little execution.

GRENADIER, } a foot soldier armed
GRANADIER, } with firelock, bayonet, and in some services with a hanger: grenadiers carry, besides their arms, a cartridge box that will hold 36 rounds. They are always the tallest and stoutest men, consequently the first upon all attacks. Every battalion of foot in the British army has generally a company of grenadiers belonging to it, which takes the right of the battalion. Grenadiers were first instituted in France in 1667, by having 4 or 5 to each company; but in the year 1670, they were formed into companies, and in 1685, were first known in the British service.

Horse GRENADIERS, called by the French *grenadiers volans*, or flying grenadiers, are such as are mounted on horseback, but [illegible] both on foot and horseback. They were first established in France by Lewis XIV. in 1676, and formed into squadrons.

GRENADIERS *auxiliaries*, Fr. Auxiliary grenadiers. During a siege, and when a place was closely invested, a certain number of grenadiers were chosen out of the battalions belonging to the trenches, for the purpose of making head against the besieged, whenever they might risk a sally, or insult the works. It was the peculiar duty of these men to stand forward on every occasion, to set fire to the gabions attached to the batteries, and to crush every attempt which might be made by the garrison to annoy the men that were posted in the trenches, &c.

It was customary among the French to increase the number of those grenadiers, who went first into danger and did the duty of the trenches. These were called *grenadiers posteiches*, or *extra grenadiers*.

Grenadieres, *ou* **Gibernes,** the bags or haversacks which hold the grenades. They were worn like powder-flasks.

GRENIER, *Fr.* *(mettre en grenier.)* To stow any thing loosely.

GRENOIR. *Fr.* *(Une espece de crible.)* A sort of sieve through which gunpowder was passed, and formed into grains of different sizes.

GREVE, *Fr.* Any flat space of ground on the bank of a river, or near the sea A place in Paris is so called, where during the old government of France, all criminals were executed. *Greve* is also used to signify the gallows.

Greves, *Fr.* armor, or covers for the legs. They were anciently worn by the French; and generally consisted of a piece of steel or stiff leather, which protected the front part of the leg.

GRIFFE, Fr. *means literally a claw*, but in a military sense, as accepted by the French, it signifies an iron instrument which is made like a hook, and is used by miners to pick out the small stones that are incorporated with cement, &c.

GRIGNON, *Fr.* broken biscuit.

GRISONS, a people formerly in alliance with the British but since annexed to Swisserland. They inhabit the mountainous parts of the Alps in Italy, and supported a well organised army, called the army of the Grisons, under general Macdonald during the war.

GROS, Fr. A body of soldiers; a detachment. The French frequently say —*Un gros de cavalerie*, a body of cavalry; *un gros d'infanterie*, a body of infantry

GROUND. The field or place of action.

Ground-*work*, in military architecture. See Foundation.

Ground *arms*, an old word of command on which the soldiers laid down their arms upon the ground.

This word of command has been exploded since the introduction of the new exercise. Soldiers are now ordered to *pile* or *stack arms*.

To take **Ground.** A battalion or company is said to take ground when it extends in any given direction. This term is likewise used in duelling, as—*They took their ground at eight or ten paces from one another*.

GRUE, *Fr.* A crane. It is frequently used in the embarkation and debarkation of cannon, &c.

GUARANTEE. Any person or power who undertakes for the performance of any stipulations agreed on between two other powers or parties.

GUARD, in the military art, is a duty performed by a body of men to secure an army or place from being surprised by an enemy. In garrison the guards are relieved every day; hence it comes that every soldier mounts guard once every three or four days in time of peace, and much oftener in time of war. See Honors.

Guards, also imply the troops kept to guard generals and other public officers, and sometimes consist of both horse and foot.

Horse-grenadier **Guards.** The first troop was raised in the year 1693 in England; the second in 1702. Each troop had a colonel, lieutenant colonel, 1 guidon or major, three exempts and captains, 3 lieutenants, 1 adjutant, 3 cornets, and 60 private men, they have been abolished.

British life **Guards.** In consequence of the reduction of the horse grenadier guards, two regiments have been raised for the specific purpose of guarding the metropolis, and of royal escorts. They are generally called the first and second life-guards. Each regiment consists of six troops of 53 men and 1 kettle drum.

Royal Regiment of Horse **Guards.** This regiment which is commonly called the Oxford Blues, from having originally been raised by the earl of Oxford, consists of nine troops.

Yeomen of the **Guards,** a kind of foot guards to the British king's person, and are generally called by a nick-name—the *beef-eaters*. They were first raised by Henry VII. in the year 1485, consisting of 250 men of the first rank, under gentry, and of a larger stature than ordinary, each being required to be 6 feet high. At present there are but 100 on constant duty, and 70 more not on duty; and when any one of the 100 dies, his place is supplied out of the 70. They go dressed after the manner of Henry VIII.'s time. Their pay is 2 shillings and 6 pence per day.

Foot **Guards,** are regiments of foot appointed for the guard of the British king and his palace, and for general service. There are three regiments of them, called the 1st, 2d, and 3d regiment of foot-guards. They were raised in the year 1660 The first regiment is at present commanded by 1 colonel, 1 lieutenant colonel, 3 majors, 27 captains, 1 captain-lieutenant, 62 lieutenants, 24 ensigns, and 3 adjutants, and consists of 3 battalions. The second regiment, or Coldstream, has 1 colonel, 1 lieutenant colonel, 2 majors, 16 captains, 1 captain lieutenant. 42 lieutenants, 14 ensigns, and 2 adjutants, and consists of two battalions. The third regiment is the same as the second. The first regiment of French guards was raised in the reign of Charles IX in the year 1563.

Imperial GUARDS, the name of a body of select troops organised by the French emperor, which greatly distinguished themselves at the battle of Austerlitz.

Trench GUARD only mounts in the time of a siege, and consists sometimes of 3, 4, or 6 battalions, according to the importance of the siege. This guard must oppose the besieged when they sally out, protect the workmen, &c.

Provost GUARD, is always an officer's guard that attends the provost in his rounds, to prevent desertion, marauding, rioting, &c. See PROVOST.

GUARD-magazine. See STORE-KEEPER.

Advanced GUARD, is a party of either horse or foot, or both, that marches before a more considerable body, to give notice of any approaching danger. These guards are either made stronger or weaker, according to the situation or danger that may be apprehended from the enemy, or the country you are to march through.

Van GUARD. See ADVANCED GUARD.

Artillery GUARD, is a detachment from the army to secure the artillery when in the field. Their *corps de garde* is in the front of the artillery park, and their sentries distributed round it. This is generally a 48-hours guard; and upon a march this guard marches in the front and rear of the artillery, and must be sure to leave nothing behind. If a gun or waggon breaks down, the officer that commands the guard is to leave a sufficient number of men to assist the gunners and aids in getting it up again.

Artillery quarter-GUARD, is frequently a non-commissioned officer's guard from the regiment of artillery, whose *corps de garde* is always in the front of their encampment.

Artillery rear-GUARD, consists in a corporal and 6 men, posted in the rear of the park.

Corps de GUARD, are soldiers entrusted with the guard of a post, under the command of one or more officers. This word also signifies the place where the guard mounts.

Counter GUARD. See FORTIFICATION.

Grand GUARD. A guard composed of three or four squadrons of horse, commanded by a field officer, posted about a mile, or a mile and a half from the camp, on the right and left wings, towards the enemy, for the better security of the camp.

Forage GUARD, a detachment sent out to secure the foragers, who are posted at all places, where either the enemy's party may come to disturb the foragers, or where they may be spread too near the enemy, so as to be in danger of being taken. This guard consists both of horse and foot, who must remain on their posts till the foragers are all come off the ground.

Main GUARD, is that from whence all other guards are detached. Those who are for mounting guard assemble at their respective private parades, and march from thence to the general parade in good order, where, after the whole guard is drawn up, the small guards are detached to their respective posts: then the subalterns cast lots for their guards, who are all under the command of the captain of the main guard. This guard mounts in garrison at different hours, according to the pleasure of the governor.

Picquet GUARD, a good number of horse and foot, always in readiness in case of an alarm: the horses are generally saddled all the time, and the riders booted.

The foot draw up at the head of the battalion, frequently at the beating of the tat-too; but afterwards return to their tents, where they hold themselves in readiness to march upon any sudden alarm. This guard is to make resistance, in case of an attack, until the army can get ready.

Baggage GUARD, is always an officer's guard, who has the care of the baggage on a march. The waggons should be numbered by companies, and follow one another regularly; vigilance and attention in the passage of hollow-ways, woods, and thickets, must be strictly observed by this guard.

Ordinary GUARDS, such as are fixed during the campaign, or in garrison towns, and which are relieved daily.

Extraordinary GUARDS, or detachments, such as are only commanded on particular occasions; either for the further security of the camp, to cover the foragers, or for convoys, escorts, or expeditions.

Soldiers are sometimes ordered to take extraordinary guards, as a punishment for slight misconduct.

Quarter GUARD, is a small guard commanded by a subaltern officer, posted in the front of each battalion, at 200 feet or more before the front of the regiment.

Rear GUARD, that part of the army which brings up the rear on a march, generally composed of all the old grand-guards of the camp.

The rear guard of a party is frequently 8 or 10 horse, about 500 paces behind the party. Hence the advanced guard going out upon a party forms the rear guard in a retreat.

Rear GUARD, is also a corporal's guard placed in the rear of a regiment, to keep good order in that part of the camp.

Standard GUARD, a small guard under a corporal, which is taken out of each regiment of horse, and mounts on foot in front of each regiment, at the distance of 20 feet from the streets, opposite to the main street.

To be upon GUARD. See *Mounting* GUARD.

To relieve GUARD. See RELIEVE.

Turn out the GUARD. A phrase used

when it is necessary for the guard to form for the purpose of receiving a general or commanding officer; on the approach of an armed party; on the beat of drum or sound of trumpet, or any alarm.

Port **Guard.** A guard detached from the main guard. All officers on port or detached guards are to send a report, night and morning, to the captain of the main guard, and at all other times, when any thing extraordinary occurs. Those who command at the ports are to draw up the bridges, or shut the barriers, on the approach of any body of armed men, of which they are to give notice to the officer of the main guard, and not to suffer any of them to come into the garrison, without leave from the governor or commander.

Out **Guards.** Under this head may not improperly be considered *outposts*, *advanced picquets*, and *detachments*. The duties of outposts are so various as usually to require detailed instructions according to circumstances. The following directions are generally applicable, and must be strictly attended to should there be any occasion for it to act upon home-service. The duty of outposts, &c. is chiefly confined to light troops, who are occasionally assisted and relieved by the line. They are always, in that case, under the immediate direction of some general. But when circumstances render it necessary, that this duty should be done from the line, the outposts fall under the command of the officers of the day, unless some particular officer be put in orders for that specific command.

All outguards march off without trumpets sounding, or drums beating. They pay no compliments of any kind; neither do their sentries take any complimentary notice of officers passing near their posts. No guards are to presume to stop any persons coming to camp with provisions (unless they be particularly ordered so to do,) and are on no account to exact or receive any thing for their free passage.

Any officer, trumpeter, or other person, who comes from an enemy's camp, is to be secured by the first guard he arrives at, till the commander in chief's, or the general's pleasure is known. When a deserter comes in from the enemy, the officer commanding a post, or guard, at which he arrives, is immediately to send him under a proper escort, (without permitting him to be delayed or examined, or any questions asked him) to the officer commanding the outposts, who, after inquiring whether he brings any intelligence immediately relating to his own post, will forward him to head-quarters.

The sentries on the outposts are always to be doubled. No officers, soldiers, or followers of the camp, are on any account to be suffered to pass the outposts, without they are on duty, or present a regular pass from head-quarters.

The men on advanced picquets are to carry their provisions with them, ready cooked, when circumstances will permit. The cavalry to carry sufficient forage for the time they are to be out.

It is the duty of officers on all guards to inspect every relief of sentries, both when they go on, and come off their posts; to call the rolls frequently, and by every means in their power to keep the men under their command in the most perfect state of vigilance and preparation.

Officers commanding outposts are to send guides, or orderly men, to the major of brigade of the day, or to the brigade-major of their own brigades, as circumstances require, in order to conduct the new guards, and to carry such orders as may be necessary.

When the army is on a march, the officers must apprize the brigade-majors of the situation of their posts, as soon as they arrive at them. All detachments of brigades, which are ordered to march *immediately*, are to be taken from the picquets, and replaced directly from the line.

Whenever detachments exceed 200 men, or upwards, a surgeon or surgeon's mate is to be sent from the corps of the officer who commands. On particular duties, the attendance of a surgeon or mate may be requisite with smaller detachments. Detachments of cavalry, of 50 or upwards, will be attended by a farrier.

As soon as an officer commanding an outpost, or advanced picquet, (whether of cavalry or infantry) arrives on his ground, he must endeavor to make himself master of his situation, by carefully examining, not only the space he actually occupies, but the heights within musquet-shot; the roads and paths leading to or near his post, ascertaining their breadth and practicability for cavalry and cannon. He should examine the hollow ways that cover the approach of an enemy; and, in short, consider all the points from which he is most likely to be attacked, either by cavalry or infantry. He will, by these means, be enabled to take measures to prevent the possibility of being surprized; and should he be attacked during the night, from the previous knowlege he has obtained of the ground, he will at once form a just estimate of the nature of the attack, and make his arrangements for defence with promptitude and decision. In order to convey the same alacrity to his men, and to prepare the most inexperienced for sudden and unexpected attacks, an officer upon an outpost will do well to put them upon the alert, by skilfully occasioning false alarms. But these must not be often repeated, nor when practised be made known to his men as having proceeded from himself; since supineness and inactivity might by degrees be the consequence of such a discovery.

An intelligent officer upon an outpost, even unprovided with entrenching tools, will materially strengthen his post, where the unobserver would remain inactive. A tree felled with judgment; brushwood cut to a certain distance; pointed stakes, about breast high, placed on the points most assailable by an enemy, may be attended with the greatest advantages, and can be effected with the common hatchets, which the men carry to cut fire-wood In short, every impediment which an officer, acting on the defensive, can throw in an enemy's way, ought to be scrupulously attended to Independently, therefore, of the means which he adopts for the immediate protection of his posts, he must look beyond that point; and as nothing checks the ardour of troops more than an unexpected obstacle, within an hundred yards, more or less, of the place attacked, he must, on his arrival at the outpost, throw up some temporary impediment at that distance. See AM. MIL. LIBRARY

Mounting GUARDS. It is indispensibly necessary, that every officer should know how to mount and come off guard.

All guards parade with ordered arms, and unfixed bayonets, without any intervals between them, the ranks open. The officer brings the guard to a shoulder; and the officers with their swords drawn, and non-commissioned officers commanding guards, are formed about forty paces in front of the centre, in two ranks, facing the line, where they are to receive the old parole and such orders as may be given them.

The major or commanding officer gives the word of command

"Officers and non-commissioned officers—Take post in front of your respective guards!—Outward face—March!"

As soon as they have taken post, fronting their respective guards, the word of command will be given—

"Officers and non-commissioned officers—to your guards—March!—Front!—Halt"

"Officers and non-commissioned officers, inspect your guards!"

The several officers and non-commissioned officers then inspect their guard as quick as possible. When there is a captain's guard, each officer is to take a rank, the serjeants accompanying them.

As soon as the inspection is over, the adjutant goes down the line and receives the report of each guard; the officers return to their posts; and the major, or commanding officer, commands—"Fix bayonets!—Shoulder!"

When the colours are brought on the parade, the drum is beat; and the drummer's call on the right.

The captain will face inwards, and the lieutenant and ensign will face to the right, and march, *quick time*, to the head of the grenadiers. The captain goes to the head of the right of his remaining men. The field officer then orders the grenadiers to close their ranks, and to march off in *quick time*, the lieutenant being three paces advanced in front of his men, and the ensign one. The colours are received as usual. And the color parties on their arrival on the left flank of the guards, will file at the *slow time*, through the ranks: the lieutenant, and the colors, in front of the front rank. The guards are to march off at the *slow time*, and by divisions, taking care, that when they open their ranks, the front rank of each keeps its exact distance from the front rank preceding it. When there are more officers than one belonging to the same guard, the second in rank is to take post, and to march past the commanding officer on the parade, at the head of the last division, instead of being in the rear of it. When there is an officer, senior to the field officer of the day, on the parade, the guards are to march by and salute him: the field officer of the day, in that case, marching at their head.

GUARD-*rooms* The following articles should properly come under the heads of furniture and utensils.

Cavalry and infantry GUARD-*rooms* are allowed a water bucket, candlestick, tin can for drink, and drinking cups; they are also allowed fire irons, and coal tray.

The rooms of the quarter-masters and serjeants of cavalry, and the serjeant-major and quarter-master serjeant of infantry, to be furnished with the necessary bedding and utensils in the same manner as is allowed to the soldiers' rooms.

GUARD, *in fencing*, implies a posture proper to defend the body from the sword of the antagonist.

The word *guard* is seldom applied among small swordsmen to any position but those of carte and tierce, the other motions of defence are stiled parades. See FENCING.

GUARDS *of the broad sword* The positions of defence adopted with that weapon are generally termed guards, and may be comprised under the inside guard, half-circle guard, hanging guard, half-hanging guard, medium guard, outside guard, St. George's guard, and spadroon guard. See BROAD-SWORD.

Prepare to GUARD, in the cavalry sword exercise, is performed by bringing the extremity of the sword-hilt up to the pit of the stomach, with the back of the hand outwards; the blade of the sword to be carried perpendicularly, with the flat in front of the left eye. From this position the *guard* is taken by darting the sword hand smartly forward towards the left ear of the antagonist.

GUARD, *in the cavalry sword exercise*, is used to denote one particular position, which consists in holding the sabre nearly horizontal across the face, the point rather higher than the hilt, the sword-hand directed towards the left ear of the antagonist Although this be peculiarly denominated *guard*, yet it is not to be considered as a position calculated to meet every sort of attack, or an eligible position to charge an enemy; but as the central point from which the requisite change for attack or defence may be effected. The other position of defence in the cavalry exercise are stiled PROTECTS.

GUASTADOURS, *Fr.* Turkish pioneers. Armenians and Greeks are generally employed in the Turkish armies, to do the fatigue-work that is necessary for the formation of a camp, or for conducting a siege.

GUDDA, an Indian term for a fool, a small fort erected upon a hill or eminence; it means literally an ass, metaphorically a fool.

GUDGE, an Indian measure 24 inches long.

GUERITE, *Fr.* Centry box, small turret. In fortified towns there are several small turrets of this denomination, which are sometimes made of wood and sometimes built with stone. They are generally fixed on the acute points of bastions and centinels are posted within them, for the purpose of watching the ditch, and of preventing any surprize in that quarter.

Those used upon the continent of Europe, particularly in France, contain from 3 to 4 French feet diameter within, and are 7 or 8 feet high. Their general shape or figure is round, pentagonal, hexagonal, &c. There are apertures made on every side, through which the centinel can observe every thing that passes in the ditch. A path about 2 or 3 feet broad is cut through the parapet and the banquette, up to the entrance of the guerite. Wooden guerites are generally used where the rampart is lined with turf only.

The spots best adapted for guerites, are at the flanked angles of bastions, and at the angles of epaulements. Sometimes indeed, they are placed in the centre of the curtains. They must jut out at the point of the angle, and the ground floor should be upon a line with the cordon, which is a sort of fillet or trace that marks the separation of the rampart from the parapet. They must likewise project far enough to afford the centinel who is within, a full view of the faces, the flanks and the curtains, and, if possible, a thorough command of all the ditches.

Gagner la GUERITE, *Fr* A familiar phrase to express the escape of a person.

Enfiler la GUERITE, *Fr.* To avoid the pursuit of another.

GUERRE, *Fr.* War; which see.

The word *guerre* is indeed so frequently used among the French, that we shall not be thought too minute in specifying some general terms under that head. The principal ones are,

GUERRE *civile*, Fr. See CIVIL WAR.

Homme de GUERRE, *Fr.* a military man.

Nom de GUERRE, *Fr.* a war name; a borrowed name; it was formerly common to assume a *nom de guerre* on entering the French army.

Petite GUERRE, *Fr.* a harrassing species of warfare. A contest for plunder.

Place de GUERRE, *Fr.* a fortified town or place.

Faire la GUERRE *à l'œil*, in a figurative sense, signifies to watch stedfastly, and without taking off the eye from a particular object.

A la guerre comme à la GUERRE. A familiar expression among the French, which implies, that things must be taken as they come.

On ne fait la GUERRE *que pour faire enfin la paix.* War, after all, must end in peace.

La guerre nourrit la GUERRE, figuratively means, that an army always subsists at the expence of the country in which it lies.

GUERRE *de Secours*, Fr. war of alliance or confederacy. This term is more especially applicable to that species of contest in which neighboring princes or countries embark to defend those with whom they are in alliance, against the aggression or exorbitant demands of a conqueror.

If such a contest or war be [illegible]ed into upon the faith of settled treaties, [illegible]e parties are bound not only to supply the stipulated number of soldiers, but even to augment their quota, if necessity should require, and sometimes to march in person against the common enemy.

If the object be to prevent any adjacent country from falling into the hands of a conqueror, who might afterwards molest the contracting party, the latter should observe many precautions before he withdraws from the contest; the principal one is to demand the possession of some strong places upon the frontiers, to prevent the inhabitants of the country that is attacked from making a separate peace.

The general selected to command an auxiliary army must be endued with wisdom and foresight. He must be wise and intelligent in order to preserve discipline and good order among his troops: and have foresight to provide for the wants of his army in a strange country, and to see that the men are not sent more into action than they ought, and that nothing is done contrary to the interest of his country.

GUERRE *de montagne*, Fr. a war which is chiefly carried on in a mountainous part of the country. This species of warfare is extremely hazardous, as it cannot be pursued without a thorough knowlege of the country, and by means of able stratagems. Marshal Saxe, in his Reveries, lays it down as a rule, that no army or detachment must venture into passes or narrow ways, without having first secured the eminences round them; and if the enemy should defend the gorges or outlets, false attacks must be resorted to, in order to divert his attention from a real one which is made against a weak quarter. It frequently happens that bye-ways or found out, which have escaped the enemy's observation, and through which detached bodies may penetrate for the purpose of turning his flanks. In a *guerre de montagne*, or mountain-contest, it is essentially necessary, that the advancing body should keep up a regular and safe communication with its rear, as well to secure a retreat if necessary, as to have a free intercourse with its convoys. See Am. Mil. Lib.

Guerre *de chicane*, Fr. See War *of chicane or stratagem.*

Guerre *Sainte*, Fr. a romantic expedition which was made by the Christians, against the Infidels in Palestine, for the purpose of re-conquering the Holy Land, from whence it was called holy war, or *guerre sainte*. See Crusade.

Foudre de Guerre, a figurative expression among the French, to mark the character of a man who has distinguished himself in battle, and is acknowleged to possess a superior degree of valor.

Flambeau de la Guerre, *Fr.* the torch of war. Any person who causes war to be carried on with violence and animosity is so called[illegible]

Aller [illegible] *petite* Guerre, *Fr.* to go out in deta[illegible]ed parties for the direct purpose of plundering an enemy's country.

Faire bonne Guerre, *Fr.* to carry on hostilities with as much humanity as the laws of war will permit.

Faire bonne Guerre, *à quelqu'un*, Fr. to treat with a man decently, but vigorously, on matters that require explanation and final arrangement.

Guerre *et pitié ne s'accordent pas ensemble*, Fr a French proverb, signifying war and commiseration seldom go hand in hand.

Guerre *juste*, Fr. a just and necessary war, that is a war of defence, such as the war of resistance against the British, from 1775 to 1783; the war of the French against the first coalition, in 1792.

Guerre *injuste*, Fr. an unjust war.

Longue Guerre, *Fr.* a long war.

Guerre *étrangère*, Fr. a foreign war.

Guerre *d'outre mer*, Fr a war beyond the seas.

Gens de Guerre. See Gens.

Le metier de la Guerre, *Fr.* the profession of arms. Hence it is figuratively said, *les Francois sont au fait du métier de la guerre de terre, et les Anglois sont au fait du métier de la guerre de mer* Frenchmen are at the top of the profession of arms on land, and Englishmen are unrivalled at sea.

Les lois de la Guerre, *Fr.* The laws of war.

Le droit de la Guerre, *Fr.* the rights of war.

Ruse de Guerre, *Fr.* a warlike stratagem.

En temps de Guerre, *Fr.* in time of war.

Munitions de la Guerre *et de bouche*, Fr. warlike stores, and provisions.

Préparatifs de Guerre, *Fr.* warlike preparations.

Place de Guerre, *Fr.* a fortified place.

Machine de Guerre, Fr. a warlike instrument or machine.

Conseil de Guerre, Fr. a council of war. It likewise means a court martial.

Vaisseau de Guerre, Fr. A ship of war.

Vaisseau armé en Guerre, Fr. an armed vessel.

C'est un grand homme de Guerre, Fr. he is a warlike character

Les malheurs de la Guerre, Fr. the misfortunes of war.

Avoir Guerre, Fr. to commence hostilities.

Avoir la Guerre. Fr. to be in a state of warfare.

Les fruits de la Guerre, Fr. the fruits, or consequences of war.

Entreprendre la Guerre, Fr. to enter into a war.

Délcarer la Guerre, Fr. to declare war.

Soutenir la Guerre, Fr. to maintain the war.

Entretenir la Guerre, Fr. to support the war.

Ces deux princes sont en Guerre, Fr. these two potentates are at war.

Etre en Guerre *ouverte*, Fr. to be at open war.

Se faire la Guerre, Fr. to make war with one another.

Aller à la Guerre, Fr. to go to war.

Allumer la Guerre *dans un état*, Fr. to light up a war, or excite troubles in any state or country.

Porter la Guerre *dans le cœur d'un pays*, Fr. to carry war into the heart of a country.

Guerre *entre les puissances egales*, Fr. war between two powers which are nearly equal in point of strength, and do not act with auxiliary troops

Qui terre a Guerre *a*, Fr. a French proverb, signifying, every man who has landed property is exposed to feuds and litigation.

GUERRIER, Fr. Warrior

Un grand Guerrier, Fr. a great warrior.

Les plus fameux Guerriers, the most celebrated warriors.

It is also used as a substantive in the feminine gender, when speaking of an amazon; as, *la vaillante guerriere.*

Guerrier, Fr. as an adjective is variously used, viz. warlike, any thing appertaining to war.

Actions Guerrieres, Fr. warlike actions.

Travaux Guerriers, Fr. works of a military or warlike nature

Exploits Guerrieres, Fr. warlike exploits.

Courage Guerrier, Fr. a warlike disposition.

Humeur Guerriere, Fr. a warlike spirit or temper.

Nation Guerriere, Fr. a warlike nation.

Il a l'air Guerrier, Fr. he has a warlike look or appearance.

Il a la mine Guerriere, Fr. he has a warlike aspect.

GUERROYER, Fr. to make war.

GUERROYEUR, Fr. a warrior.

GUET, Fr. This term was particularly attached to those persons belonging to the French body-guards, that did duty during the night.

Guet *de la mer*, Fr. the watch which the inhabitants belonging to parishes, towns, or fortified places, situated on the sea coast, were bound to keep for its security. On occasions of this sort, the signal of alarm was made during the day by smoke, and during the night by lighted combustibles.

GUET, Fr in a military sense, signifies rounds, or those duties of a soldier, or patroling party, which are prescribed for the security of a town, &c. and to prevent surprises.

Faire le Guet *au haut du belfroi*, Fr. to be put upon duty, or stand watch at the top of a church belfry.

Asseoir le Guet, Fr. to set the watch.

Poser le Guet, to post the watch.

Etre au Guet, Fr. to be upon the watch.

Guet *à pied*, Fr. foot patrole.

Guet *à cheval*, Fr. horse patrole.

Ce sont les bourgeois qui font le Guet, Fr. the inhabitants of the place go the rounds.

Cri au Guet, Fr. the hue and cry.

Le Guet *vient de passer*, the patrole has just passed.

Avoir l'œil au Guet, Fr. to be minutely watchful and observing.

Avoir l'oreille au Guet, Fr. to be listening for the direct purpose of acquiring information.

Maison de Guet, *Fr.* round-house.

Mot du Guet, *Fr.* watch-word.

Donner le mot de Guet, to give the watch-word.

Se donner le mot de Guet, *Fr.* to understand one another. In familiar intercourse it means likewise to play booty together

Guet *apens*, Fr. Ambush; any premeditated design to injure another in a clandestine manner. The French frequently use this expression; as

Ce n'est point un rencontre ni un duel, c'est un Guet *apens*, Fr. it is neither an accidental meeting, nor a duel, it is a downright plot to murder him.

Droit du Guet *et garde*, Fr. a right which was formerly enjoyed in feudal France, by some lords of the manor, and by which they were authorised to call upon their vassals to watch and patrole for the security of their castles, and to silence the frogs.

GUETRE. See Gaiter.

Tirer vos Guetres, Fr. Go about your business: a familiar phrase which is used among the french, when a person is discarded, or turned away in a summary manner.

Il y a laissé ses Guetres, *Fr.* a figurative expression among French soldiers, signifying that a person died in such a place.

GUETRER, *Fr.* to put on gaiters.

GUETTE, *Fr*, a name given by the French carpenters to a stake that is fixed sideways and which serves for various purposes.

GUETTER, *Fr.* a familiar phrase, signifying to watch the motions of any body, for the purpose of circumvention or surprize.

Guetter likewise means to watch for a fit opportunity to get access to any person.

Il y a des sergens qui le Guettent, *Fr.* he is closely watched by some serjeants.

Le soldat Guettoit *son colonel pour lui presenter un placet*, Fr. the soldier watched his colonel, in order to lay his petition before him.

GUEUSE, *Fr.* a rough piece of iron, which has been melted, and has not gone through any further process or purification.

GUICHET, *Fr.* a small door or outlet, which is made in the gates of fortified towns. It is generally four feet high, and two broad; so that a man must stoop to get through. In 1669, the high town of the city of Albuquerque, in Spain, escaped being surprized by means of one of these outlets. In garrison towns, the guichet is left open for the space of one quarter of an hour after the retreat, in order to give the inhabitants time to enter.

Guichet *d'une porte d'écluse*, an opening which is made in the gate of a sluice, and which closes by means of a floodgate. It serves to let in water when wanted.

GUIDES, (*guides*, Fr.) are generally the country people in the neighborhood where an army encamps: they are to give you intelligence concerning the country, the roads by which you are to march, and the route by which the enemy may approach you. Guides should be faithful, because, in giving you false intelligence, or guiding you wrong, they may greatly endanger the army. Several guides are requisite, as every corps that marches by night should have one at least There is sometimes a captain, or chief of the guides, who should be a man of intelligence, active, and attentive to the diligence and fidelity of his people. He should always have a sufficient number with him, and who are well acquainted with the country.

In time of war, particularly in the seat of it, the guides invariably accompany head-quarters, and a certain number is allotted not only to general officers, but to all detachments made from the main body, either for the purpose of combating the advanced posts of an enemy, or protecting escorts, or securing convoys. Guides, in an army, may be justly called its principal outsets. They are to a body of men what the eyes are to the human frame. They cannot, however, be too jealously watched.

Guides, the name given to the non-commissioned officers who take positions to mark the pivots, marches, formations, and alignements in modern discipline; it is expressed in French by the word *jaloneur*, from *jalon* a post. See Jalon

Guides *of manœuvre*, the name given to those which the French call *jalsneur*, and the British markers. The use of guides, is perhaps one of the best conceived and ingenious methods which could be devised to perfect the art of manœuvring troops; and one of its happiest advantages is its fitness for raw or undisciplined troops, which by the aid of *guides* of manœuvre, may be brought to comprehend and execute every species of movement in company, platoons, divisions, or battalions, in one third of the time formerly required; and in a manner much more perfect than was formerly considered as the utmost excellence. See *Am. Mil. Lib.*

GUIDES, corps of, under the new French dynasty have a new organization of which we hear only by some decisive effects.

Corps des Guides, *Fr.* The corps of guides. This body was originally formed in France in the year 1756, and consisted of one captain, one 1st lieutenant, one 2d lieutenant, two serjeants, two corporals, one anspessade, and twenty privates, called *fusiliers-guides.*—Twelve out of the twenty-five (which was the effective number) were mounted. These consisted of one serjeant, one corporal, and ten fusiliers. Their particular duty was to carry orders that required dispatch; and on this account they were always attached to head-quarters. The twelve fusiliers were mounted on small active horses, about four French feet, five or six inches high. They were supplied with a saddle, blue saddle-cloth trimmed with white, holster-caps the same; and they were armed with a fusil and cut-and-thrust bayonet, a pistol, sabre, with a cartouch-box, containing 20 rounds. They wore half-boots, or bottines.—Each man carried, moreover, one field utensil out of the twelve belonging to the company. These utensils consisted of four hatchets, four shovels, and four pick-axes. The thirteen *fusilier guides* on foot were armed with a fusil six inches shorter than the regular musquet, with a blade-bayonet and a cartouch-box, holding twenty rounds of ball cartridges. Their uniform was a blue coat, waistcoat, and breeches, with flat white metal buttons. The hat was bordered with common white lace for the soldiers, and of a superior quality for the serjeants; which latter had three silver brandenburgs hanging from each shoulder The corporals had three made of white worsted, and the anspessade two ditto. The daily pay of the captain was 4 livres, or 6s. 8d. the 1st lieutenant 1 livre, 7 sols, and 6 deniers; equal to 2s. 4d. the 2d lieutenant 1 livre, or 10d. each serjeant 13 sols, or 6 1-2d. each corporal 10 sols, or 6d. each anspessade 8 sols, 6 deniers, or 4 1-2d. and each private 6 sols, 6 deniers, or 3 1-2d.

GUIDON, Fr. See Sight.

Guidon, in ancient military history, the name of a sort of standard broad at one extreme and almost pointed at the other, and slit or divided into two.

Guidon also implies the officer who carries the guidon or standard.

Guidons, in the French service, were exclusively attached to the Gendarmerie; and among them the word formerly meant not only the standard but likewise the officer who carried it.

GUIGNEAU, Fr. This word means the same thing as *chevêtre*. It is a piece of wood which joins the joists of a floor, that are cut to make room for the hearth of a chimney-piece.

GUILLAUME, Fr. a tool somewhat like a plane which is used by carpenters, and of which there are several sorts according to the nature of the work.

GUINDAS, Fr. All machines which by means of a wheel and its axis serve to raise heavy loads, are so called by the French.

GUINDER, Fr. to draw up any weight. Hence the term *guindage*, which is applied to the movement of loads that are raised and let down.

GUISARMIERS, Fr. a body of free archers, or bowmen, who took their name from an offensive weapon called *guisarme*, or *jusarme*, somewhat similar to the *voulgue*, a sort of javelin, which was used in hunting the wild boar. Its length was equal to that of the halbert, and it had a broad piece of sharp iron fixed to one end.

GULLY. Any hollow which has been made by running water. Ambuscades are frequently laid in such places.

GUN, a fire-arm, or weapon of offence, which forcibly discharges a bullet through a cylindrical barrel by means of gunpowder. The term is chiefly applied to cannon.

Somnerus derives gun from *mangon*, a warlike machine, which was used before the invention of guns. He establishes his derivation by taking away the first syllable.

Curricle GUNS are small pieces of ordnance, mounted upon carriages of two wheels, and drawn by two horses. The artillery-man is seated on a box, and the whole can be moved forward into action with astonishing rapidity. The tumbrils belonging to curricle guns carry 60 rounds of ball cartridges. Great improvements are daily making in this machine on account of its acknowleged utility.

Great Gun. See Cannon.

Evening Gun } is generally a 6 or
Morning Gun } 12-pounder, which
is fired every night about sun-set, and

every morning at sun-rise, to give notice to the drums and trumpets of the army, to beat and sound the retreat and the reveille.

Morning and evening, and other signal guns, by the United States regulations, are not to be fired from larger calibres than 6 or 12 pounders; which calibres are seldom mounted on permanent works.

Gun-*fire*. The time at which the morning or evening gun is fired.

Gun-*boat*, a boat which is generally used to form a kind of floating battery, to cover the landing of troops.

GUNNEL, *or* **GUNWALE**, the lower part of any port where ordnance is planted. It likewise means that beam in a pontoon which supports the main waste.

GUNNER, in the artillery, is the title of the first and second artillerist at a gun in battery; all the rest are called aids.

GUNNERY, the art of determining the motions of bodies shot from cannon, mortars, howitzers, &c. See the article Projectile.

The late ingenious Mr. Robins, having concluded from experiments, that the force of fired gunpowder, at the instant of its explosion, is the same with that of an elastic fluid of a thousand times the density of common air, and that the elasticity of this fluid, like that of the air, is proportional to its density, proposes the following problem.

The dimensions of any piece of artillery, the weight of its ball, and the quantity of its charge being given; to determine the velocity which the shot will acquire from the explosion, supposing the elasticity or force of the powder at the first instant of its firing to be given.

In the solution of this important problem, he assumes the two following principles: 1. That the action of the powder on the shot ceases as soon as it is got out of the piece. 2. That all the powder of the charge is fired, and converted into an elastic fluid, before the shot is sensibly moved from its place.

These assumptions, and the conclusions above mentioned, make the action of fired gunpowder to be entirely similar to that of air condensed a thousand times; and from thence it will not be difficult to determine the velocity of the shot arising from the explosion: for the force of the fired powder diminishing in proportion to its expansion, and ceasing when it is got out of the piece; the total action of the powder may be represented by the area of a curve, the base of which represents the space through which the ball is accelerated, while the ordinates represent the force of the powder at every point of that space; and these ordinates being in reciprocal proportion to their distance from the breech of the gun, because when the spaces occupied by the fired powder are as 1, 2, 3, 4, &c. the ordinates representing it will be as 1, 1-half, 1-3d, 1-4th, &c. it appears that the curve will be a common parabola, and that the area intercepted between is an asymptote; and that the two ordinates representing the force of the powder at the first explosion, and at the muzzle of the piece, will represent the total action of the powder on the shot: but if the shot were urged through the same space by an uniform force equal to its gravity, the total action of this force would be represented by a rectangle, the base of which would be the base of the curve or intercepted portion of the asymptote above mentioned, and the height of which would represent the uniform force of gravity. Hence the square of the velocity of the shot resulting from gravity is given, being the velocity it would acquire from a height equal to the space through which the powder accelerates it; and the proportion between the hyperbola and the rectangle is given from the analogy between the hyperbolic paces and logarithms; therefore the velocity of the ball arising from the action of the fired gunpowder will be given.

Mr. Robins has also given us an ingenious way of determining, by experiments, the velocity with which any shot moves at any distance of the piece it is discharged from.

This may be effected by means of a pendulum made of iron, having a broad part at bottom, covered with a thick piece of wood, which is fastened to the iron by screws; then having a machine like a common artillery-gin, on two of its poles, towards their tops, are screwed sockets, on which the pendulum is hung by means of a cross piece, which becomes its axis of suspension, and on which it should vibrate with great freedom. Somewhat lower than the bottom of the pendulum there should be a brace, joining to which the pendulum is suspended; and to this brace there is fastened a contrivance made with two edges of steel, something in the manner of a drawing-pen; the strength with which these edges press on each other, being diminished or increased at pleasure by means of a screw. To the bottom of the pendulum should be fastened a narrow riband, which, passing between the steel edges, may hang closely down by means of an opening cut in the lower piece of steel.

The instrument being thus fitted, if the weight of the pendulum, the respective distances of its centre of gravity, and of its centre of oscillation from the axis of suspension, be known, it may from thence be found what motion will be communicated to this pendulum by the percussion of a body of a known weight, moving with a known degree of velocity, and striking it into a given point; that is, if the pendulum be supposed to rest before the percussion, it will be known what vibration it should make in consequence of such a blow; and if the pendulum, being at rest, is struck by a body of a known weight, and the vibration which the pendulum makes after the stroke is known, the velocity of the striking body may from thence be determined.

Now the extent of the vibration made by the pendulum may be increased by the riband: for if the pressure of the steel edges on the riband be regulated by the screw, so as to be free and easy, though with some minute resistance to hinder it from slipping itself; then setting the pendulum at rest, let the part of the riband between the pendulum and the steel edges be down straight, but not strained, and fixing a pin in the part of the riband contiguous to the edges, the pendulum, swinging back by means of the impulse of the ball, will draw out the riband to the just extent of its vibration, which will be determined by the interval on the riband between the edges and the space of the pin.

The computation by which the velocity of the shot is determined from the vibration of the pendulum, after the stroke, is founded on the principle of mechanics; that if a body in motion strikes another at rest, and they are not separated after the stroke, but move on with one common motion, then that common motion is equal to the motion with which the first body moved before the stroke; whence, if that common motion and the masses of the two bodies are known, the motion of the first body before the stroke is thence determined. On this principle it follows, that the velocity of a shot may be diminished in any given ratio, by its being made to impinge on a body of weight properly proportioned to it.

It is to be observed, that the length to which the riband is drawn, is always near the chord of the arc described by the ascent; it being so placed, as to differ insensibly from those chords which must frequently occur: and these chords are known to be in the proportion of the velocities of the pendulum acquired from the stroke. Hence it follows, that the proportion between the lengths of the riband, drawn out at different times, will be the same with that of the velocities of the impinging shots.

Now from the computations delivered by Mr. Robins, it appears, that the velocity of the bullet was 1641 feet in one second of time, when the chord of the arc described by the ascent of the pendulum, in consequence of the blow, was 17 1-4 inches, the proportion of the velocity with which the bullets impinge, to the known velocity of 1641 feet in one second, will be determined.

Mr. Robins was (till of late) the only author who attempted to ascertain the velocity of a military projectile by experiment; yet his conclusions seem to be unsatisfactory. Perhaps he was too much attached to the forming of a system, and warped his experiments a little in favor of it. The resisting power he assigns to the air is probably too great; and his notion of the tripling of this power when the velocity of the projectile exceeds that of sound, seems to be rather an ingenious theory than a well-grounded fact. However, experiment alone must decide these points.

The great importance of the art of gunnery is the reason that we distinguish it from the doctrine of projectiles in general; for in truth it is no more than an application of those laws which all bodies observe when cast into the air, to such as are put in motion by the explosion of guns or other engines of that sort: and it matters not whether we talk of projectiles in general, or of such only as belong to gunnery; for, from the moment the force is impressed, all distinction, with regard to the power which put the body first in motion is lost, and it can only be considered as a simple projectile.

Every body cast into the air moves under the influence of two distinct forces. By the one it is carried forward with an equal motion, and describes equal spaces in equal times, in the direction in which it was projected; and by the other, which we call gravity, is drawn downwards in lines perpendicular to the surface of the earth, with a motion continually accelerated, or whose velocity is always increasing. If either of these forces were destroyed, the body would move according to the direction of the other alone, so far as its motion was not hindered by the interposition of other bodies; but as both continue to act, the course of the projectile must be determined by a power compounded of those two forces.

Gunnery is also the province of the artillerist, and comprehends, in a native sense, the perfect knowlege of the power of the machine, and the proportions of powder to be employed in order to produce any required effect. It also comprehends a knowlege of the properties and composition of gunpowder, and the various kinds of shot, which are employed in the practice of gunnery; the metal best adapted to make guns, the proper weight and corresponding proportions between the calibre of the gun and the shot fired from it, and also the dimensions fitted for the various services in which gunnery is employed: for batteries of permanent works, for ships, for field service, and the light or flying artillery. Gunnery indeed comprehends all the duties of the able artillerist and bombardier.

Gunnery. By the assistance of good tables of practice, and the tables of amplitudes, sines, tangents, and secants, all the cases in gunnery in a nonresisting medium may be easily solved; and perhaps the solution may be sufficiently correct for practice, if the initial velocity of the projectile be not so great as to make the air's resistance considerable.

For the tables of ranges with ordnance, see the different natures, as *Gun*, *Mortar*, &c. and for the tables of amplitudes, sines, tangents, and secants, see pages 247 and 248.

Upon Horizontal Planes.

1. The greatest range is at 45° nearly.

2. The ranges with different elevations with the same charge, are as the double sines of the angles of elevation.

3. Any angle and its complement give the same range nearly.

4. The times of flight are as the sines of the angles of elevation.

5 The altitude of the curve, at any elevation is found by this proportion: as Radius: tangent of angle of elevation: : $\frac{\text{range}}{4}$: altitude.

6. The time of flight at 45° is equal the square root of the range in feet, divided by 4, or more nearly = $\sqrt{\text{quotient}}\,^{2}$ of the range in feet, divided by 16.1, or the space passed through in the first second by gravity.

Having the first graze with a given elevation and charge, to determine the charge for any other first graze and elevation, multiply the known charge and elevation into the proposed first graze; also the proposed elevation into the known first graze, and divide the first product by the last, for the charge required.

Upon inclined Planes, at 45° Elevation. Case 1st. Given the charge and inclination of the plane, to find the range.

Multiply the horizontal range with this given charge, (found in the tables of ranges) by the number found opposite the angle of inclination of the plane, in the first column of multiplyers, in the table of amplitudes, under the head *Ascents*, if it be inclined above the horizon; and *Descents*, if below the horizon, for the range required.

Case 2d. Given the range and inclination of the plane, to find the charge.

Multiply the number found in the above mentioned table opposite the angle of inclination of the plane, in the second column of multipliers, under the head *Ascents*, or *Descents*, according as it is above or below the horizon, by the given range; for the range on a horizontal plane at 45°, the charge for which may be found from the tables of ranges.

Upon inclined planes, at any elevation.

There are always two elevations with which any range, (less than the greatest) may be made; and these elevations are always the complements of each other. The greatest range upon a horizontal plane is at 45°; or when the direction bisects the angle formed by the horizontal and vertical plane; also the greatest range upon any plane is made with that direction which bisects the angle between the plane and the zenith; and all other directions which make equal angles with this direction, (on each side of it) will also make equal ranges on the said plane; for the direction that bisects the angle between any plane and the zenith is the same with respect to that plane as the direction at 45° is with respect to the plane of the horizon.

Rules.—1st. The elevation which gives the greatest range on a given ascent is equal to half the sum of 90° added to the ascent.

2d. The elevation which give equal ranges on a given ascent, are the complements of each other added to the ascent.

3d. The elevation which gives the greatest range on a descent, is equal to half the complement of the descent.

If the range and inclination be given, the least charge that will reach the object, may be found as follows: multiply the tangent of the proper elevation into the proposed range, for the horizontal range whose charge is required.

Table of Amplitudes.

Degrees.	Ascents. Multip'rs		Descents. Multip'rs.	
	1st.cl.	2d. cl.	1st.cl.	2d. cl.
1	.983	1 02	1.02	.983
2	.966	1.03	1.04	.966
3	.949	1.06	1.05	.950
4	.932	1.07	1.07	.932
5	.916	1.09	1.09	.916
6	.900	1.11	1.11	.900
7	.884	1.13	1.13	.884
8	.868	1.15	1.15	.868
9	.852	1.18	1.17	.853
10	.836	1.20	1.19	.836
11	821	1.22	1.22	.821
12	.805	1.24	1.24	.805
13	.789	1.27	1.27	.789
14	.774	1.29	1.29	.774
15	.758	1.32	1.31	.763
16	.742	1.35	1.34	.745
17	.726	1 38	1.37	.730
18	.711	1 40	1.39	.720
19	.693	1 45	1.42	.704
20	.677	1.48	1.45	.690
21	660	1.52	1.48	.675
22	.643	1 56	1.52	662
23	.625	1.60	1.55	.645
24	.607	1.64	1.58	.633
25	.589	1.70	1.62	.617
26	570	1.76	1.66	.603
27	.550	1.82	1.69	.592
28	.530	1.86	1.73	578
29	.510	1.96	1.78	.562
30	.488	2 05	1.82	.549
31	.466	2.14	1.87	.534
32	.442	2.26	1.92	.526
33	.418	2.41	1.97	.508
34	.393	.55	2 02	495
35	.366	2.73	2.08	.488
36	.338	2.96	2 13	.470
37	.309	3.24	2.20	.455
38	.278	3.60	2.26	443
39	.245	4.09	2.33	.430
40	.210	4 80	2.40	.417
41	.173	5.78	2.48	.404
42	.134	7.46	2.56	390
43	.092	10.90	2.64	.380
44	.045	22.22	2.73	[illegible]
45	.000	infinite.	2.88	[illegible]

Table of Natural Sines, Tangents, and Secants.

Degrees.	Sines.	Tangents.	Secants.
1	.018	.018	1.000
2	.035	.035	1.000
3	.052	.052	1.001
4	.070	.070	1.002
5	.087	.087	1.004
6	.105	.105	1.006
7	.122	.123	1.008
8	.139	.141	1.010
9	.156	.158	1.012
10	.174	.176	1.015
11	191	.194	1.019
12	.208	.213	1.022
13	.225	.231	1.026
14	.242	.249	1.031
15	.259	.268	1.035
16	.276	.287	1.040
17	.292	.306	1.046
18	.309	.325	1.051
19	.326	.344	1.058
20	.342	.364	1.064
21	.358	.384	1.071
22	.375	.404	1.079
23	.391	.424	1.086
24	.407	.445	1.095
25	.423	.466	1.103
26	.438	.488	1.112
27	.454	.510	1.122
28	.469	.532	1.133
29	.485	.554	1.143
30	.500	.577	1.155
31	.515	.601	1.167
32	.530	.625	1.179
33	.545	.649	1.192
34	.559	.675	1.206
35	.574	.700	1.221
36	.588	.727	1.236
37	.602	.754	1.252
38	.616	.781	1.269
39	.629	.810	1.287
40	.643	.839	1.305
41	.656	.869	1.325
42	.669	.900	1.346
43	.682	.933	1.367
44	.695	.966	1.390
45	.707	1.000	1.414
46	.719	1.036	1.440
47	.731	1.072	1.466
48	.743	1.111	1.494
49	.755	1.150	1.524
50	.766	1.192	1.556
51	.777	1.235	1.589
52	.788	1.280	1.624
53	.799	1.327	1.662
54	.809	1.376	1.701
55	.819	1.428	1.742
56	.829	1.483	1.788
57	.839	1.540	1.836
58	.848	1.600	1.887
59	.857	1.664	1.942
60	.866	1.732	2.000
61	.875	1.80	2.063
62	.883	1.881	2.130
63	.891	1.963	2.203
64	.899	2.050	2.281
65	.906	2.145	2.366
66	.914	2.246	2.459
67	.921	2.356	2.559
68	.927	2.475	2.669
69	.934	2.605	2.790
70	.940	2.747	2.924
71	.946	2.904	3.072
72	.951	3.078	3.236
73	.956	3.271	3.420
74	.961	3.487	3.628
75	.966	3.732	3.864
76	.970	4.011	4.134
77	.974	4.331	4.445
78	.978	4.705	4.810
79	.982	5.145	5.241
80	.985	5.671	5.759
81	.988	6.314	6.392
82	.990	7.115	7.185
83	.993	8.144	8.206
84	.995	9.514	9.567
85	.996	11.430	11.474
86	.998	14.301	14.336
87	.999	19.081	19.107
88	.999	28.636	28.654
89	.999	57.290	57.299
90	1.000	infinite.	—

GUNS.—*Calibres of European Guns, expressed in inches.*

English.		French.		Spanish.		Dutch.		Russian.		Portug.	
pr	inch.	pr	inch.	pr	inch.	pr	inch.	pr	inch.	pr	inch.
42	7.018	—	—	—	—	—	—	36	6.86	48	7.49
32	6.41	36	6.9	36	6.84	32	6.4	30	6.47	36	6.8
24	5.823	24	6.03	24	6.03	24	5.92	24	6.	24	5.93
18	5.292	16	5.26	18	5.52	18	5.45	18	5.45	18	5.4
12	4.623	12	4.78	12	4.8	12	4.76	12	4.76	12	4.7
9	4.200	8	4.18	9	4.2	8	4.13	8	4.17	9	4.3
6	3.668	—	—	—	—	6	3.78	6	3.78	6	3.75
4	3.204	4	3.315	—	—	—	—	—	—	—	—
3	3.913	—	—	—	—	—	—	—	—	—	—
1	2.019	—	—	—	—	—	—	—	—	—	—

Length and weight of English Brass guns.

	Kind.	Length in			Weight.		
		Calib.	ft.	in	ct.	qr.	lb.
42	Pounders						
32	———	15.244	9	6	66	—	—
24	Heavy	18.721	10	0	55	2	—
	Medium	19.574	9	6	53	0	9
	Light	16.483	8	0	41	3	2
	Do. new	10.302	5	0	16	3	13
18	Light do.	13.000	6	3	24	0	—
12	Heavy	13.000	5	9	18	0	—
	Desagulier's	24.659	9	0	31	2	8
	Medium, old	19.468	7	6	22	1	21
	Medium, new	16.872	6	6	21	3	—
	Light	16.872	6	6	18	—	—
*	Do. new	12.978	5	0	8	3	4
		13.000	5	0	12	—	—
6	Heavy	26.112	8	0	19	1	6
*	Desag's. Med.	22.876	7	0	12	—	24
	med. new	18.500	6	0	8	3	27
	med. reduced	17.000	5	6	8	0	22
*	Gen. Belford's	16.342	5	0	5	2	21
	Light, common	14.706	4	6	5	—	18
3	Heavy	28.836	7	0	11	3	19
*	Desagulier's	24.717	6	0	6	—	—
*3	Light, common	14.418	3	6	2	2	27
	Light infantry	12.358	3	0	1	3	16
	Gen. Pattison's	12.358	3	0	1	2	19
1	Pr. Amuzette	29.7	5	0	2	2	12
	Do.	35.6	6	0	3	0	11
	Do.	41.5	7	0	3	1	12

The guns marked (*) are the only ones used by the British since 1795, on general service.

Length and weight of French brass guns, in their old weights and measures. †

Kind.		Length in				W't.
		Calib.	ft.	in.	li.	lbs.
24 Prs.	Siege	—	9	11	5	5628
16 —		—	9	7	—	4111
12 —	Garrison	—	—	—	—	3184
8 —		—	—	—	—	2175
12 —	Field	18.0	6	6	—	1808
8 —		18.	5	8	—	1196
4 —		18.	4	6	—	590
1 —		—	—	—	—	266

† The French weights and measures have assumed new names, and are reduced to strict proportions since the revolution. The weights here referred to are the old. For the new French syrtem of weights and measures, see the word WEIGHTS.

Length and weight of English iron guns.

Kind.	Length in			Wt.		* Proportion betweenshot and gun.
	Calib.	ft.	in.	ct.	qr.	
42 Prs.	17.098	10	—	67	—	
	16.244	9	6	65	—	170
32 —	18.721	10	—	58	—	
	17.725	9	6	55	—	193
24 —	20.604	10	—	52	—	
	19.574	9	6	49	2	231
	18.542	9	—	47	2	
18 —	21.542	9	6	42	—	
	20.408	9	—	40	—	249
12 —	24.659	9	6	34	—	
	23.361	9	—	32	—	
	22.063	8	6	31	2	
	19.468	7	6	29	1	294
9 —	21.4	7	6	24	2	305
	19.9	7	—	23	—	
6 —	26.2	8	—	22	—	
	19.6	6	—	16	2	411
4 —	22.4	6	—	22	1	343
	20.6	5	6	11	1	
3 —	18.6	4	6	7	1	270

* This column expresses the number of English pounds of metal in the guns, to each pound in the shot.

French iron guns, in English weights, &c.

Kind.	Length in			Weight.		
	Calib.	ft.	in.	ct.	qr.	lbs.
36 Pounders	16.18	9	8	74	3	—
24 ———	18.18	9	1½	51	—	—
16 ———	21.01	9	7	42	—	—
	18.45	8	4	43	2	—
	16.92	7	8½	35	—	—
12 ———	21.54	8	7	31	2	—
	20.5	8	2	20	3	—
	17.14	6	10	28	—	—
8 ———	24.64	8	7	24	1	—
	17.22	6	—	16	—	—
4 ———	17.19	4	9	—	—	—

Ranges of brass guns, with one shot. 1793.

Kind.		Charge.	To the first graze of the shot.					
			PB	1°	2°	3°	4°	5°
		lbz.	yds	yds.	yds.	yds.	yds.	yds.
24	Heavy	8 0	47	781	1032	1405	1585	1710
	Medium	8 0	488	757	1103	1425	1557	1745
	Light	3 0	162	364	606	722		1390
12	Heavy							
	Medium	4 0		705	973	1189		
	Light	3 0		601	810	1063		
6	Desagulier's	2 0		646	966	1325		
	6 Feet	2 0		683	948	1327		
	5 : 6 Med.	2 0		775	1003	1444		
	5 : 6 Red'd.	2 0		642	976	1150		
	5 Feet	1 8		587	825	950		
	4 : 6 Feet.	1 8		628	804	991		
3	Desagulier's	1 0		679	883	918		
Amuzette of 5 feet		0 8		604	800			
Do. 7 feet		0 8		656	830	1000		

Ranges from Brass Field Guns, with small charges. 1798.

Kind.	Charge.	First Graze with different elevations.								Extreme range.
Pr.		1°	2°	3°	4°	5°	6°	7°	8°	
12	10 oz.	199	290	390	385	597	716	695	788	from 800 to 1000
	1 lb.	280	416	729	777	966	1090	1054	1295	from 1200 to 1500
6 Pr.	5 oz.	111	222	376	432	618	625	650	788	from 800 to 1000
	8 oz.	277	401	754	826	925	980	1103	1100	from 1000 to 130[illegible]

N. B. The above was a 12 Pr. Medium, and a 6 Pr. Desagulier's. The distances are given in yards.

Ranges from Brass Guns, with Two Shot: 1793.

Kind.	Charge.		Elevation.		Medium first Graze in yards.	
	lbs.	oz.	1°	30′	1st Shot.	2d Shot.
12 Pounder, Medium	4	—	1	30	607	706
6 : Desagulier's	2	—	1	30	621	739
6 : or 5 feet	1	8	1	30	586	732
3 : Desagulier's	1	—	1	30	523	638

Effects of case shot from a battalion gun—Light 6 Pr. length 5 feet—Weight 5 cwt. 3 qrs. 21 lbs. against a target 8 feet high, and 90 feet long.

Distance of Target.	Kind of charge.	Elevation.	No. put into the height of 6 feet, or the height of Infantry.	No. put into the height of 8 feet, or the height of Cavalry.
Y'ds.		deg.		
500	12 balls, 8z. each, 3 in a tier, 1¼ lb. powder	1	3	3
		1½	3	4
		2	3	4
400	same ch'ge	1	6	6
		1½	4	5
		2	4	5
300	same ch'ge	½	6	7
		1	3	6
		1½	4	6
400	34 balls, 3z. each, 7 in a tier, 1¼ lb. powder	P B	10	12
		½	9	10
		1	6	8
300	same ch'ge	P B	11	13
		½	12	15
		1	7	9

N. B. There were three rounds fired at each change, but they were all so nearly alike, that it has been thought necessary to put down only one of them. 1802.

Ranges with sea service iron guns. 1796.

Kind of Guns, 32, 24, and 18 Pounders.

Elevation.	Proportion of powder.	Kind of shot.	Range
deg.			Yards.
2	1-3	With single shot to the first graze	1200
2	¼	Do. Do.	1000
2	¼	2 shot, ranged close together, to	500
4	1-3	Single shot	1600
4	¼	Do.	1500
7	1-3	Do.	2150
7	¼	Do.	2020
2	¼	1 round shot and 1 r'd. of grape range with effect together, to	600
4	¼	One round of grape shot, alone, to	1000
2	¼	One double headed, or bar shot will range to the first graze	800

Ranges with 5 1-2 inch shells, from a 24 Pr. Iron Gun. Length of Gun 9 1 2 ft. Wt. 49 ct. 26lb.

Elevation.	2 Pounds.			2 lbs. 8 oz.			3 Pounds.		
	Flight.	Range to		Flight.	Range to		Flight.	Range to	
		First Graze	Extreme		First Graze	Extreme		First Graze	Extreme
deg.	Sec.	Yards	Yards.	Sec.	Yards	Yards.	Sec.	Yards	Yards.
1	1	213	1139	2¾	562	1456	1	277	1424
2	1¾	384	1267	1½	442	1413	1¾	526	1464
3	2¼	565	1413	2-	647	1553	2¼	740	1600
4	2¼	750	1479	3¾	896	1639	3½	880	1679
5	3¼	836	1670	4	915	1510	5	1182	1733
6	4	896	1495	5	1140	1657	6¼	1384	1787
7	6½	1180	1492	6	1205	1481	6¼	1410	1749
8	6⅓	1305	1526	6½	1259	1544	7	1520	1744
9	7¼	1329	1527	7	1341	1561	7¾	1722	1938
9½	6¼	1229	1453	—	—	—	8½	1748	1881

Ranges with 4 2-5 Shells from a 12 Pounder, Medium.

Elevation.	8 Ounces.			12 Ounces.			1 lb. 8oz.		
	Flight	First Graze	Extreme Range.	Flight	First Graze	Extreme Range.	Flight	First Graze	Extreme Range.
deg.	Sec.	Yards.	Yards.	Sec.	Yards.	Yards.	Sec.	Yards.	Yards.
1	1 1-2	156	From 800 to 1200						
2	2	293		2 1-2	350	From 1100 to 1300		707	From 1400 to 1600
3	2 1-2	363		3 1-2	355			758	
4	3 1-2	462		4	679			849	
5	4	587		3 1-2	641			1075	
6	4	621		5	941			1150	
7	4, 1-2	898		6	1020			1300	
8	5	781							

Ranges with French brass field guns, with round shot.

Kind.	Charge.	Elevation.		Range in Toises.
		Lines of Tan. Scale.	Deg. M.	
12 Pr.	4 lbs.	L. M.	— 58	300
		2	1 3	350
		10	1 39	400
		14	1 49	450
		16	1 56	480
8 Pr.	2½ lbs.	L. M.	— 58	300
		6	1 24	350
		12	1 51	400
		16	2 8	450
		20	2 24	480
4 Pr.	1½ lbs.	L. M.	— 58	250
		4	1 20	300
		8	1 40	350
		12	2 —	400
		16	2 20	450
		18	2 40	480

The above are in old French weights and measures.

Definitions of GUNNERY. 1. The impetus at any point of the curve is the perpendicular height to which a projectile could ascend, by the force it has at that point; or the perpendicular height from which a body must fall to acquire the velocity it has at that point.

2. The diameter to any point of the curve is a line drawn through that point perpendicular to the horizon.

3. The points where the diameters cut the curve are called vertexes to these diameters.

4. The axis is that diameter which cuts the curve in its highest or principal vertex, and is perpendicular to the tangent at that point or vertex.

5. The ordinates to any diameter are lines drawn parallel to the tangent at the point where that diameter cuts the curve, and intercepted between the diameter and curve.

6. The absciss is that part of the diameter which is intercepted between the ordinate and the curve.

7. The altitude of the curve is the perpendicular height of the principal vertex above the horizon.

8. The amplitude, random, or range, is the distance between the point of projection and the object aimed at.

9. The elevation of the piece is the angle its axis (produced) makes with the horizon, and the axis itself is called the direction.

10. The horizontal distance to which a mortar, elevated to a given angle, and loaded with a given quantity of powder, throws a shell of a given weight, is called the range of that mortar, with that charge and elevation.

11. The inclination of a plane is the angle it makes with the horizon either above or below.

12. The directrix is the line of motion, along which the describing line or surface is carried in the genesis of any plane or solid figure.

Laws of motion in GUNNERY.

1. Spaces equally run through with equal velocities, are to one another as the times in which they are run through, and conversely.

2. Spaces equally run through in the same or equal times, are to one another as the velocities with which they are run through, and conversely.

3. Spaces run through are in the same proportion to one another, as their times multiplied into their velocities, and conversely.

4. A body urged by two distinct forces in two different directions, will in any given time be found at the point where two lines meet that are drawn parallel to these directions, and through the points to which the body could have moved in the same time, had these forces acted separately.

5. The velocities of bodies, which by the action of gravity begin to fail from the rest, are in the same proportion as the times from their beginning of their falling.

6. The spaces run through by the descent of a body which began to fall from rest, are as the squares of the times, from the beginning of the fall.

7. The motion of a military projectile is in a curve.

GUN-*powder*, a composition of nitre, sulphur, and charcoal, well mixed together and granulated, which easily takes fire, and expands with amazing force, being one of the strongest propellents known.

GUN-*powder.—Proportions of the different ingredients for making gunpowder, by different powers in Europe:*

	Eng.	Fran.	Sweden.	Poland.	Italy.	Russia.
Nitre	75	75	75	80	76 1-2	70
Sulphur	10	9 1-2	9	8	12 1-2	11 1-2
Charcoal	15	15 1-2	16	12	12 1-2	18 1-2
Pounds	100	100	100	100	100	100

GUNPOWDER. This well known powder is composed of seventy five parts, by weight, of nitre, sixteen of charcoal, and nine of sulphur, intimately blended together by long pounding in wooden mortars, with a small quantity of water. This proportion of the materials is the most effectual. But the variations of strength in different samples of gunpowder are generally occasioned by the more or less intimate division and mixture of the parts. The reason of this may be easily deduced from the consideration, that nitre does not detonate until in contact with inflammable matter; whence the whole detonation will be more speedy, the more numerous the surfaces of the contact. The same cause demands, that the ingredients should be very pure, because the mixture of foreign matter not only diminishes the quantity of effective ingredients which it represents, but likewise prevents the contacts by its interposition.

The nitre of the third boiling is usually chosen for making gunpowder, and the charcoal of light woods is refered to that of those which are heavier, most probably because this last, being harder, is less pulverable. An improvement in the method of making the charcoal has lately been adopted, which consists in putting the wood, cut into pieces about nine inches long, into an iron cylinder laid horizontally, closed at one end, and furnished with small pipes at the other, that the pyroligneous acid and carburetted hidrogen may escape, and thus exposed to the heat of a fire made underneath. It is said, this charcoal improves the strength of gunpowder so much, that only two thirds of the old charge of gunpowder for ordnance are now used in our navy. The requisite pounding of the materials is performed in the large way by a mill, in which wooden mortars are disposed in rows, and in each of which a pestle is moved by the arbor of a water-wheel: it is necessary to moisten the mixture from time to time with water, which serves to prevent its being dissipated in the pulverulent form, and likewise obviates the danger of explosion from the heat occasioned by the blows. Twelve hours pounding is in general required to complete the mixture; and when this is done, the gunpowder is in fact made, and only requires to be dried to render it fit for use.

Proofs of powder.—The first examination of powder in the British mills, is by rubbing it in the hands to find whether it contains any irregular hard lumps. The second is by blasting 2 drams of each sort on a copper plate, and in this comparing it with an approved powder; in this proof it should not emit any sparks, nor leave any beads or foulness on the copper. It is then compared with an approved powder, in projecting an iron ball of 64 lbs. from an 8 inch mortar, with a charge of 2 ounces. The best cylinder powder generally gives about 180 feet range, and put 150; but the weakest powder, or powder that has been redried, &c. only from 107 to 117 feet.

The merchants' powder, before it is received into the government service, is tried against powder of the same kind made at the royal mills; and it is received if it gives a range of 1-20 less than the king's powder with which it is compared. In this comparison both sorts are tried on the same day, and at the same time, and under exactly the same circumstances.

The proof of fine grained, or musquet powder, is with a charge of 4 drams from a musquet barrel, to perforate with a steel ball a certain number of 1-2 inch wet elm boards, placed 3-4 inch asunder, and the first 39 feet 10 inches from the barrel: the king's powder generally passes through 15 or 16, and restoved powder from 9 to 12. The last trial of powder is by exposing about 1 pound of each sort, accurately weighed, to the atmosphere for 17 or 18 days; during which time, if the materials are pure, it will not increase any thing material in weight, by attracting moisture from the atmosphere.

In this exposure 100 lbs. of good gunpowder should not absorb more than 12 oz. or somewhat less than one per cent.

Different modes of trying gunpowder have been adopted. A ready one is, to lay two or three small heaps on separate pieces of writing paper, and fire one with a red hot wire. If the flame ascend quickly, with a good report, leaving the paper free from white specks, and not burnt into holes; and at the same time the other heaps be not fired by the sparks, the powder is well made, and the ingredients are good.

There are experiments which seem to show, that gunpowder is stronger in the fine impalpable form, than when granulated. This appears to be true with regard to gunpowder originally made, or pounded till it assumes that form; but it may be doubted, whether it have any foundation in general, or indeed that the greater strength depends at all upon this form.

British Powder Marks.—The different sorts of powder are distinguished by the following marks on the heads of the barrels.

N°. 1 L G Cylinder
N°. 2 S G Cylinder } Marked in Red.
N°. 3 F G Cylinder

S A—The dust from N°. 3, and F G cylinder.

R A—For rifle arms.

4-7 Cylinder } mixed—Marked white
3-7 Restoved } L G.

L G or F G in blue, is powder made of pitcoal.

(R S) { N°. 1 L G } Marked in yellow, is restoved.
{ N°. 3 F G }

The *red* L G, F G, or S G, denotes powder entirely made of the cylinder charcoal, and is that which is now always used on service. The white L G being a mixed powder, is not so uniform as the other, and is therefore generally used in filling shells, or for such other purposes as do not require much accuracy. All powder for service is mixed in proportions according to its strength, so as to bring it as much as possible to a mean and uniform force.

French Gunpowder.—The French proof ball is of brass, and weighs 60 lbs. French: the diameter of the mortar 7 inches 9 points, or 3-4 of a line, and has one line of windage. The chamber holds exactly 3 ounces; and their best powder must give a range of 90 toises, and their restoved powder a range of 80 toises, to be received into the service. But the powder they now make, when new, will give a range of 100 and 120 toises; and Mr Lombard calculates all his tables from experiments made with powder giving 125 toises with the eprouvette.—The above dimensions and weights are all of old French standard.

Invention of GUN-*powder*, is usually ascribed to one Bartholdus Schwartz, a German monk, who discovered it about the year 1320; it is said to have been first used in war by the Venetians against the Genoese in the year 1380. Thevel says its inventor was one Constantine Anelzen, a monk of Friburg. Peter Mexia says it was first used by Alphonsus XI. king of Castile, in the year 1342. Ducange adds, that there is mention made of this powder in the registers of the chambers of accounts of France, so early as the year 1338; and friar Bacon, expressly mentions the composition in his treatise *De Nullitate Magiæ*, published at Oxford in the year 1216. Some indeed are of opinion, that the Arabians or the latter Greeks were the first inventors of gunpowder, about the middle ages of our æra; because its Arabic name is said to be expressive of its explosive quality.

Considerable improvements have lately been made in the composition of gunpowder by the Chinese.

Method of making GUNPOWDER. Take nitre, sulphur, and charcoal; reduce these to a fine powder, and continue to beat them for some time in a stone mortar with a wooden pestle, wetting the mixture occasionally with water, so as to form the whole into an uniform paste, which is afterwards reduced to grains, by passing it through a sieve; and in this form, being carefully dried, it becomes the common gunpowder. For greater quantities mills are used, by means of which more work may be performed in one day than a man can do in a hundred. See MILL.

This destructive powder is composed of 75 parts nitre, 9 sulphur, and 16 of charcoal, in the 100.

The granulation of gunpowder is performed by placing the mass, while in the form of a stiff paste, in a wire sieve, covering it with a board, and agitating the whole: by this means it is cut into small grains or parts, which, when of a requisite dryness, may be rendered smooth or glossy by rolling them in a cylindrical vessel or cask. Gunpowder in this form takes fire more speedily than if it be afterward reduced to powder, as may be easily accounted for from the circumstance, that the inflammation is more speedily propagated through the interstices of the grains. But the process of granulation does itself, in all probability, weaken the gunpowder, in the same manner as it is weakened by suffering it to become damp; for in this last case, the nitre, which is the only soluble ingredient, suffers a partial solution in the water, and a separation in crystals of greater or less magnitude; and accordingly the surfaces of contact are rendered less numerous.

The detonation of gunpowder has been always an interesting problem in chemistry. Numerous theories have been offered, to account for this striking fact. But it is now very well settled, that the nitric acid is decomposed by the heat of ignition; that is oxigen, combines with the charcoal, and forms carbonic acid, while the nitrogen, or other component part, with steam from the water of crystallization, becomes disengaged in the elastic form. Berthollet found, that the elastic product, afforded by the detonation of gunpowder, consisted of two parts nitrogen gas, and one carbonic acid gas. The sudden extrication and expansion of these airs are the cause of the effects of gunpowder.

The muriat afforded by combining the oxigenized muriatic acid and potash, affords gunpowder of much greater strength than the common nitre, but too dangerous for use. For the method of making this salt, See ACID (MURIATIC, OXIGENIZED)

How to refine nitre. Put into a copper, or any other vessel, 100 weight of rough nitre, with about 14 gallons of clean water, and let it boil gently for half an hour, and as it boils take off the scum; then stir it about in the copper, and before it settles put it into your filtering-bags, which must be hung on a rack, with glazed earthen pans under them, in which sticks must be laid across for the crystals to adhere to: it must stand in the pans for two or three days to shoot; then take out the crystals and let them dry. The water that remains in the pans boil again for an hour, and strain it into the pans as before, and the nitre will be quite clear and transparent; if not, it wants more refining; to effect which proceed as usual, till it is well cleansed of all its earthy parts.

How to pulverize nitre. Take a copper kettle, whose bottom must be spherical, and put into it 14lb, of refined nitre, with 2 quarts or 5 pints of clean water; then put the kettle on a slow fire; and when the nitre is dissolved, if any impurities arise, skim them off; and keep constantly stirring it with 2 large spattles till all the water exhales; and when done enough, it will appear like white sand, and as fine as flour; but if it should boil too fast, take the kettle off the fire, and set it on some wet sand, by which means the nitre will be prevented from sticking to the kettle. When you have pulverised a quantity of nitre, be careful to keep it in a dry place.

Different kinds of GUNPOWDER. It being proper that every one who makes use of gun-powder should know of what it is composed, we shall give a brief account of its origin and use. Gunpowder, for some time after the invention of artillery, was of a composition much weaker than what we now use, or than that ancient one mentioned by Marcus Græcus: but this, it is presumed, was owing to the weakness of their first pieces, rather than to their ignorance of a better mixture: for the first pieces of artillery were of a very clumsy, inconvenient make, being usually framed of several pieces of iron bars, fitted together lengthways, and then hooped together with iron rings; and as they were first employed in throwing stone shot of a prodigious weight, in imitation of the ancient machines, to which they succeeded, they were of an enormous bore, When Mahomed II. besieged Constantinople in the year 1453, he battered the walls with stone bullets, and his pieces were some of them of the calibre of 1200lb. but they never could be fired more than four times in the 24 hours, and sometimes they burst by the first discharge Powder at first was not grained, but in the form of fine meal, such as it was reduced to by grinding the materials together; and it is doubtful, whether the first grain of it was intended to increase its strength, or only to render it more convenient for the filling it into small charges, and the loading of small arms, to which alone it was applied for many years, whilst meal-powder was still made use of in cannon. But at last the additional strength, which the grained powder was found to acquire from the free passage of the fire between the grains, occasioned the meal-powder to be entirely laid aside. The coal for making gunpowder is either that of willow or hazle; but the lightest kind of willow is found to be the best, well charred in the usual manner, and reduced to powder. Corned powder was in use in Germany as early as the year 1568; but it was first generally used in England in the reign of Charles I.

Government powder, } such powder, as
Ordnance-powder, } having undergone
the customary proof, is so called, and received into the public magazines.

It has been recommended by a French writer to preserve gunpowder at sea by means of boxes, which should be lined with sheets of lead. M. de Gentien, a naval officer tried the experiment by lodging a quantity of gunpowder, and parchment cartridges, in a quarter of the ship which was sheathed in this manner. After they had been stowed for a considerable time, the gunpowder and cartridges were found to have suffered little from the moisture; whilst the same quantity, when lodged in wooden cases, became nearly half rotted.

Proof of Gunpowder, first take out of the several barrels of gunpowder a measure full, of about the size of a thimble, which spread upon a sheet of fine writing paper, and then fire it, if the inflammation be very rapid, the smoke rise perpendicular, and the paper be neither burnt nor spotted, it is then to be judged good powder.

Then 2 drams of the same powder are exactly weighed, and put into an eprouvette; which if it raises a weight of 24 pounds to the height of 3 1-2 inches, it may be received into the public magazine as proof.

GUN-*powder prover*. See EPROUVETTE.

GUNSHOT, the reach or range of a gun. The space through which a shot can be thrown.

GUNSHOT-*wound*. Any wound received from the discharge of cannon or fire-arms

GUNSMITH, a man who makes fire-arms.

GUNSTICK. The rammer or stick with which the charge is driven into the gun.

GUNSTOCK. The wood to which the barrel of the gun is fixed.

GUNSTONE. Such materials, chiefly stone, as were formerly discharged from artillery.

GUR, a house or dwelling in India.

GURRIES, mud forts made in India so called. These forts are sometimes surrounded with ditches

GURRY, an indian term to express a certain division of time, comprehending 24 minutes; but the word among the Europeans is generally understood to mean an *hour*. A watch is called a gurry.

GUALIOR, a stupendous military fortification on the summit of a rocky eminence in India, south of Jumma, 28 coss, or 56 English miles, from Agra. It was once taken by a daring enterprize by Col. Popham.

GHYRETTY, cantonments seven coss (14 English miles) from Calcutta. It is a palace built by Mr. Dupleix, which the British took by force in 1797, and imprisoned the principal French colonists of Chandernagore there. This was two years before the war in Europe.

GYMNASTIC, (*gymnastique*, Fr.) pertaining to athletic exercises, such as leaping, wrestling, drawing the cross bow, fencing, &c. The Greeks, among whom the art originated, were accustomed to strip whenever they performed any part of it.

H

HABERGEON, a small coat of mail, or only sleeves and gorget of mail, formed of little iron rings or meshes linked together.

HABILIMENTS *of war*, in ancient statutes, signify armor, harness, utensils, or other provisions, without which it is supposed there can be no ability to maintain a war.

HABILLEMENT *des troupes*, Fr. properly means the regimental clothing or the uniform of soldiers. The clothing of the French army was not reduced to any regular system before the reign of Louis the 14th. The following observations relative to this important object are too appropriate, and suit all countries too well, to be left unnoticed.

The dress of a soldier should be plain, and made up so as to facilitate every movement of his person, to guard him against the inclemency of the weather, and to be remarkable for its collective uniformity of appearance. Next to these general requisites, the ease of each individual should be consulted; particularly with regard to the breeches, trowsers, or pantaloons. Regimental surgeons will certainly say, that in some instances men have suffered as much from an inattention to this part of their dress, as from the most harrassing service in the face of an enemy. The loins should invariably be covered, the stride be made easy, and the bend of the knee be left unembarrassed. Under the old French government, the whole infantry was clothed in white, with facings of various colors; but both the officers and the men were extremely plain in every part of their dress. Since the revolution, the national color, which was white, has been changed to blue. Not only the soldiers, but the waggon-drivers, &c. had a particular dress to distinguish them from other people. See UNIFORM.

Un HABIT *d'ordonnance*, } regimen-
Un HABIT *d'uniforme*, Fr. } tal coat,
or clothing.

HACHE, *Fr.* a hatchet.

HACHE *d'armes*, Fr. a hatchet or battle-axe.

In ancient times this weapon was frequently resorted to by whole armies when they engaged. At present it is only used on particular occasions, in sorties, &c. or boarding ships.

HACHE, *Fr.* A term which was formerly used among the French to express a certain punishment that military delinquents were obliged to undergo. It consisted in being loaded with a pack or saddle, which the guilty person was under the necessity of carrying a specified distance, and which entailed disgrace upon the bearer.

HACHER, *Fr.* to cut to pieces. This word is very frequently used among the French in a military sense, viz

Un bataillon, ou un escadron s'est fait Hacher *en pièces*, a battalion, or a squadron has suffered itself to be cut to pieces.

They likewise make use of the expression in familiar discourse, as speaking of truth, viz

On se feroit Hacher *en pièces pour la verite;* one would be cut to pieces for the support of truth.

HACHEREAU, *Fr.* a small hatchet.

HACKERY, an Indian two wheel carriage or cart, drawn by oxen.

HACQUETON. See Hatchet.

HACQUET-WAGEN, a four-wheeled waggon, which is used in the Prussian service to convey pontoons. The underframe of this carriage is built like that of a chariot, by which means it can turn without difficulty.

HAIL-SHOT. See Grape-Shot.

HAIR-CLOTH, a stuff made of hair. It is laid on the floor of powder-magazines and laboratories, to prevent accidents of fire from the shoes of the men treading or rubbing upon nails, sand, or gravel.

Hair-Cloth.—Weight 30 lbs.—length 15 feet—breadth 11 feet.

HAKIM. A term used in India to signify a master, the governor of a city, a judge, or a king. It sometimes means the government, and power.

HALBERD, } a weapon formerly car-
HALBERT, } ried by the serjeants of foot and artillery. It is a sort of spear, the shaft of which is about 6 feet long, generally made of ash. Its head is armed with a steel point edged on both sides. Besides this point, which is in a line with the shaft, there is a cross piece of iron, flat and turned down at one end, but not very sharp, so that it serves equally to cut down or thrust with. This weapon has of late been exchanged for the half-pike.

HALBERDIER, a soldier armed with a halbert.

HALEBARDE, *Fr.* halbert. This weapon, as well as the pike, was first adopted by the French, in imitation of a similar one which was carried by the Swiss troops. It was not known in that country before the reign of Louis XI. and when it fell into disuse among the rank and file, it was confined to the serjeants of infantry The length of a French halbert was six of their feet from one extremity to the other. The handle or shaft was a long stick, with a strong, sharp, iron ferrel at the end, and the upper part had a flat sharp blade, with a cross bar attached to it.

HALF, is frequently used in military terms. Thus,

Half-Brigade, *(demie-brigade,* Fr.*)* which signifies half the number of men of which a whole brigade is composed. A brigade of infantry in the French army, consists of six battalions, each of one thousand men, making together six thousand men. Three thousand of course constitutes a demie-brigade, or half-brigade. In the British service, a brigade is various, according to the number of regiments that may be encamped, or lie contiguous to each other. Sometimes two, three, or four regiments form a brigade; so that half the recited number of men which composes a brigade, whether of cavalry or infantry, makes a half-brigade.

Half-Companies. The same as subdivisions, and equal to a platoon.

Half-Distance, signifies half the regular interval or space between troops drawn up in ranks, or standing in column.

Half-Files, half the given number of any body of men drawn up two deep.

Half-files are so called in cavalry, when the men rank off singly.

Half-File *leader, (Chef de demi-file,* Fr.*)* the foremost man of a rank entire.

Half-Batta. An extra allowance which has been granted to the whole of the officers belonging to the British east Indian army, except in Bengal, when out of the company's district in the province of Oude In the upper provinces double batta is allowed. All above full is paid by the native princes, as the troops stationed in that quarter are considered as auxiliaries. The full batta is an allowance granted to both officers and men whenever they are under canvas. Batta is equal to full pay.

Half-Circle *guard*, one of the guards used with the broad-sword to parry an inside cut below the wrist, formed by dropping the point of the sword outward in a semicircular direction, with the edge turned to the left, and raising the hand to the height of the face.

Half-Circle *parade*, a parade of the small sword, used against the thrust in low carte.

Half-Hanger, *or* Half-Hanging-Guard, a position of defence in the art of broad-sword; differing from the hanging-guard, in the sword-hand not being raised so high, but held low enough to see your opponent over the hilt. See Broadsword.

Half-Moon, *or demi-lune,* Fr. See Fortification.

Half-Pay, a certain allowance which is made to officers in the British service who have been reduced, in consequence of some general order that effects whole corps, supernumerary companies or individuals.

It may likewise be considered as a compensation to individuals, who have been permitted to retire from the active functions of a military life.

Half-Pay *officers* are, to all intents and purposes, out of the reach of military cognizance. They cannot be tried by martial law; nor are they liable to be called upon either as members of a court martial, or for the purpose of actual service.

HALF-PIKE, (*demi pique*, Fr.) a small pike, which was formerly carried by officers.

HALF-SWORD, close fight, within half the length of a sword.

HALT [French *halte*], is a discontinuance of the march of any body of men, armed or unarmed, under military direction. It is frequently practised for the purpose of easing troops during their progress through a country, or to render them fresh and active previous to any warlike undertaking.

Frequent halts are made during the passage of obstacles, and in an intersected country, in order to obviate the inconvenience and danger which must attend a column whose head is advanced too far to preserve the regular succession of all its component parts. Nothing, indeed, can be more pregnant with mischief than such a chasm; for, if the enemy be in the neighborhood, both front and rear are exposed. The best way in the passage of defiles, &c. is to proceed to a distance beyond it which shall be sufficiently extensive to admit of the whole number; there to halt, and not to march forward until the rear has completely cleared the obstacle.

HALT, is likewise a word of command in familiar use when a regiment is on its march from one quarter to another. The men are permitted to refresh themselves half-way. It should be generally observed, that to prevent soldiers from straggling about, or getting among persons who might entice them to be disorderly, a strict order ought to be given by the commanding officer of every battalion not to allow any division or detachment to halt in or near a town or village. A convenient midway spot should be chosen for the purpose, and when the men have piled their arms (which may be done in line or in column), a few steady soldiers should be detached to guard the ground, and to prevent others from straggling beyond certain limits. Among the French it was usual for the commanding officer of a battalion, division, or detachment, in hot weather, to send a sergeant and a few steady grenadiers forward, in order to secure good water for the troops. This practice ought to be avoided as much as possible; for men are more exposed to suffer from drinking when overheated, than they would be by patiently enduring the thirst until they reached the spot where the day's march is to terminate.

To **HALT** *in open column for the purpose of wheeling up into line.* When the several companies of one or more battalions have entered the alignement, and marched with their guides of manœuvre, or pivot flanks along the line, covering each other at their due distances (for which company officers are answerable), the open column is then in a state to be wheeled into line.

As soon, therefore, as the head or rear division, according to circumstances, arrives at the given point where it is to form line, the commander of the battalion gives the word *mark time*, in order to afford the several ranks time to correct their dressing and distance by their guides and pivots: on the delivery of this word, the foot which is then off the ground, finishes its proper step, and the other is brought up to it; and when the whole are dressed the word is given to *halt*. The instant the *halt* is ordered, the commanding officer from the head division of each battalion (taking care that an adjutant is placed in the true line) makes any small correction on a near point in that line that the pivots may require, although no such correction ought to be necessary

To **HALT** *after having wheeled from open column.* The officers commanding companies, &c. having during the wheel turned round to face their men, and inclined towards the pivot of the preceding company, as they perceive their wheeling men make the step which brings them up to their several pivots, they give the word *mark time—halt*. The men, on receiving this last word of command, halt with their eyes still turned to the wheeling flank, and each officer being then placed before the preceding guide or pivot, to which his men are then looking, corrects the interior of his company upon that pivot, his own pivot, and the general line of the other pivots. This being quickly and instantaneously done, the officer immediately takes his post on the right of his company, which has been preserved for him by his serjeant. Thus the whole line, when halted, is imperceptibly dressed.

In cavalry movements, when the open column halted on the ground on which it is to form, wheels up into line, the following specific instructions must be attended to:

Distances being just, guides and pivot leaders being truly covered, the caution is given, *Wheel into line!* when the then pivot-flank leaders place themselves each on the *reverse* flank of such divisions, as by its wheel up brings them to their true place in the squadron. The leading division of each squadron sends out a guide to line himself with the pivot files. At the word *march!* the whole wheel up into line, which is marked by the guides or pivots, and also bounded by the horses' heads of the faced guides of it.—*Dress—halt!* is then given (as well as the other words by each squadron leader) the instant before the completion of the wheel; the eyes are then turned to the standing flank (to which the correction of the squadron is made), and remain so till otherwise ordered; so that a line formed by wheels to the left, will remain with eyes to the right; and one formed by wheels to the right will remain with eyes to the left.

During the wheel up, the standard moves to its place in squadron, and at the halt every individual must have gained his proper post.

HALTE, *Fr.* See Halt.

HALTER-CAST. In farriery, an excoriation or hurt in the pastern, which is occasioned by the horse endeavoring to scrub the itching part of the body near the head and neck, and thus entangling one of his hinder feet in the halter. The consequeece of which is, that he naturally struggles to get free and sometimes receives very dangerous hurts in the hollow of his pastern.

HALTING, in farriery, a limping, or going lame; an irregularity in the motion of a horse, arising from a lameness in the shoulder, leg, or foot, which obliges him to tread tenderly.

HAMLET, a small village.

Tower **Hamlets**. The militia raised in the district of the Tower of London, is so called, and is divided into two battalions.

HAMMER, a well-known instrument with an iron head, for driving nails, &c. The artillery aids each carry one in his belt, in order to clear the vent from any stoppage.

Hammer, a piece of iron which stands in a perpendicular direction above the cover of the pan, being a part of the same, and serving to produce those sparks of fire that ultimately occasion the explosion of the gunpowder. The Germans call it *pfannen deckel*, the cover of the pan; but this expression does not convey a distinct and clear idea of the use that is made of it. Nothing, however, can be less appropriate than the term appears amongst us. We call the part which is struck against to produce sparks of fire the hammer; and the part which strikes, the cock; whereas that part of the cock which holds the flint is, in fact, the hammer, and the other is without a proper name. The Germans call the cock *hahn*. It is not within our province to propose new terms; we are therefore satisfied in having pointed out the contradiction.

Hammer-Spring, the spring on which the hammer of a gun-lock works. It is also called *feather-spring*.

HAMMOCK, (*hamac*, Fr.) a sort of bed made of cotton or canvas. Those used in America consisted of a broad piece of canvas which was suspended between two branches of a tree, or between two stakes, and in which the savages are accustomed to sleep.

Among sailors the hammock is about six feet long and three feet broad, and drawn together at the two ends, and hung horizontally under the deck for the sailors to repose in. In time of battle, the hammocks are strongly fastened and laid above the rails on the quarter-deck and forecastle, to barricade, and to prevent the execution of small shot.

HAMPE, *ou* **HANTE**, *Fr.* a shaft; a long stick to which any thing else is attached; as a sharp blade to form a halbert or pike.

HANCES, the ends of elliptical arches.

HAND. Among the Mysoreans the print of a hand is reckoned a form equivalent to an oath. The hand is one of their military ensigns, and always carried by their princes to war.

Hand, a measure of four inches, or of a clinched fist by which the height of a horse is computed. Thus horses are said to be so many hands high.

The sizes of military horses should run from 15 hands and 1 inch to 16 hands high, and the age 4 or 5 off, if possible.

Hand is also used for the division of a horse into the fore and hind parts. The parts of the fore-hand are the head, neck, and fore-quarters; and those of the hind-hand include all the other parts of his body.

Hand is likewise used for the horseman's hand. Thus spear-hand, or sword-hand, is the horseman's right hand, and bridle-hand is his left hand.

Hand-Barrow, a machine made of light wood, of great use in fortification for carrying earth from one place to another; or in a siege, for carrying shells or shot along the trenches.

Hand-Barrow. Weight 13 pounds, length 5 feet 4 inches.

Hand-Breadth, a measure of three inches, or a space equal to the breadth of the hand, the palm.

Hand-Gallop, a slow and easy gallop, in which the hand presses the bridle to hinder increase of speed.

Hand-Grenades, small iron shells, from 2 to 3 inches diameter, filled with powder which being lighted by means of a fuse, are thrown by the grenadiers amongst the enemy; until lately out of use. See Grenades.

Hand-Gun, a gun held in the hand.

Hand-Mallet, a wooden hammer with a handle, to drive fuses, or pickets, &c. in making fascines or gabion batteries.

Hand-Screw, is composed of a toothed iron bar, which has a claw at the lower end and a fork at the upper: the bar is fixed in a stock of wood, about 2.5 feet high, and 6 inches thick, moved by a rack-work, so that this claw or fork being placed under a weight raises it as far as the bar can go.

Hand-Spike, in gunnery, a wooden lever 5 or 6 feet long, flattened at the lower end, and tapering towards the other, useful in moving guns to their places after being fired and loaded again, or for moving other heavy weights.

Hand-Spikes. Common, weight 10 pounds, length 6 feet.

Hand-to-Hand, close fight; the situation of two persons closely opposed to each other.

HANDFUL, used figuratively, in a

military sense, to denote a small quantity or number, as a handful of men.

To HANDLE, to manage, to wield.

Handle *arms*, a word of command (when the men are at ordered arms) by which the soldier is directed to bring his right hand briskly up to the muzzle of his musquet, with his fingers bent inwards. This word of command is frequently used at the private inspection of companies, and always precedes—*Ease arms*.

This term was formerly used in the manual from the *support* to the *carry*. It is now however used only in the instance just mentioned.

To HANG-FIRE. Fire-arms are said to hang-fire when the flame is not speedy in communicating from the pan to the charge. This defect may arise from the powder being damp or the touch-hole foul.

To **Hang** *upon*. To hover, to impede.

To **Hang** *upon the rear of a retreating enemy*. To follow the movements of any body of men so closely as to be a constant annoyance to them.

It requires both judgment and activity in the commanding officer of a pursuing army to execute this business without endangering his troops. For it might happen that the retreating enemy, seeing an opportunity to make a retrograde flank movement from its front, would practice a feint in its rear, and suddenly appear upon the right or left of his pursuers. To prevent a surprize of this sort, constant vedettes and side-patroles must be detached, and the pursuer must never attempt to follow through any considerable length of defile, or cross rivers, without having secured the neighboring eminences, and been well informed as to the nature of the stream, for some extent on his right and left. Without these precautions he might himself be taken in flank and rear.

To **Hang** *upon the flanks of an enemy*, is to harass and perplex him in a more desultory manner than what is generally practised when you press upon his rear.

Hussars, light dragoons, mounted riflemen, and light infantry detachments are well calculated for this service. Light pieces of artillery are likewise extremely useful, but they should be cautiously resorted to, as ambuscades might be laid, and their removal would require too much time. A perfect knowlege of the country in which you fight, aided by intelligent guides and faithful scouts, will be one of the best safeguards in all operations of this kind.

HANGER, a short-curved sword.

HANGING-GUARD, a defensive position in the art of broad-sword; it is formed by raising the sword-hand high enough to view your antagonist under your wrist, and directing your point towards his ribs. See **Broadsword**.

HANNIBAL, a celebrated general among the Carthagenians, who crossed the Alps, and threatened Rome. This able man lost all the fruits of his uncommon exertions and military talents by relaxing from that active conduct, by which he had thrown the Roman legions into confusion. He is a striking example of the propriety of marshal Saxe's observations on the necessity of vigorous and unremitting operations against a retreating enemy. See **General**.

HANOVERIANS, troops belonging to Hanover, formerly subject to the king of Great Britain, and of which a considerable body were employed to subjugate America, for which forty pounds sterling a head were paid out of the British treasury to the elector of Hanover; they are now subjects of France.

HANSE, *or* HANS, (*Hans Teutonique*, Fr.) a body or company of merchants united together for the promotion of trade.

Hans *towns*, (*villes Hanseatiques*, Fr.) Certain towns and places in Germany and the north of Europe in which a commercial compact, or agreement, for the benefit of commerce was entered into by merchants of respectability. The four towns that first united for this purpose were Lubec, Brunswick, Dantzic, and Cologne, and on that account they bore the distinguishing title of mother-towns. After the original establishment of this company had taken place, several towns became anxious to belong to so respectable and useful a company. They were accordingly adopted, and obtained the denomination of god-daughters. The number of these associated places amounted to 81, and they were generally called the Hanseatic or Anseatic towns. In the year 1372, a treaty of alliance was entered into between Denmark and the Hans towns. Amsterdam and other Dutch cities were included, as may be seen in a copy of that treaty which has been preserved by Boxhoom.

HAQUET, *Fr.* a dray; a species of waggon formerly used in the artillery; they differed in their sizes and demensions according to the nature of the service.

Military HARANGUES, (*harangues militaires*, Fr.) It was usual among the ancients for generals, &c. to harangue their soldiers previous to an engagement. This custom, however, is too old to be traced to its origin. Short harangues, if any are adopted, will always prove the best; for that natural impulse by which the aggregate of mankind are driven into acts of peril and possible destruction, is of too subtile and too volatile a nature to bear suspence.

We find among the ancient historians various instances in which the generals of armies have judged fit to harangue their troops. It must, however, be acknowleged, that the greater part of these harangues have been studiously made out by ingenious writers, and put into the lips of the heroes they have thought proper to celebrate. Those which contain most common sense, and are conveyed in short pithy sentences, will always produce the best effects.

Eloquence is certainly a qualification which every general of an army should possess; but, it is not, in our days, the most essential requisite in his character. Cæsar was naturally endowed with a most bewitching talent in the exercise of words; and he used it on many occasions to considerable advantage. The manner in which he was accustomed to address his men became so celebrated, that several persons belonging to the army he commanded carefully selected his *military harangues;* and, if we may believe the Chevalier Folard, the emperor Augustus was particularly pleased and entertained in having them read to him.

In Chevalier Folard's opinion, those speeches which are enlivened by expressions of humor and by occasional raillery, will always have the most influence over the minds of common soldiers. War although apparently dictated by the laws of nature (for war and bloodshed seem to have been the concomitants of man from his first creation) cannot be so far congenial to the feelings of civilized mortality, as to mingle with sober sense and rational reflection. Consequently, those discourses which lead the common mind to think, and which induce the common heart to feel, are ill adapted to acts of violence and mutual rancour. A witticism or humorous expression has sometimes the most happy effect. The answer which Hannibal the Carthaginian made to one of his generals, whose name was *Gisco*, produced a fortunate emotion among the soldiers. The latter observed, *that the enemy's great numbers somewhat surprized him;* Hannibal, as Plutarch relates the story, immediately said, with a sort of indignant look---*But there is another circumstance, Gisco, which ought to surprize you much more, and which you do not seem to know.* Gisco requested to know what it might be *It is*, replied Hannibal, *that in so large a multitude there should not be one man whose name is Gisco* This sarcastic observation created a loud laugh among all who surrounded the general, and the humor of the saying was instantly conveyed through the ranks.

Antigonus, according to the same authority, never adopted any other mode of conveying his sentiments to the troops. The Lacedemonians were even more laconic; but every thing they uttered was full of sound sense and energy of thought Thucydides, who was not only a good historian, but likewise an able general, makes his heroes speak in a very emphatic and eloquent manner. Tacitus does not appear to possess much excellence that way; and the speeches which we find in Polybius, are copied after what was spoken by the several generals, whom he celebrates. Titus Livius is too ornamental and too flowery. An active and intelligent general must be a perfect stranger to that species of oratory.

We read in Varillas, a French historian, who was born in 1624, and wrote a history of France beginning with Louis XI. and ending with Henry III. &c. that Zisca (or Ziska) a gentleman and soldier of Bohemia (who was so called because he happened to lose an eye,) made a remarkable speech to his followers. We refer our inquisitive readers to that writer's works for one of the most energetic, most soldier-like, and persuasive pieces of military eloquence that perhaps is extant. Zisca succeeded Huss, who had armed the peasantry of Bohemia to resist the oppressions of the emperor and the Roman pontiff; and although he lost his other eye at the siege of Rabi, his influence and courage were so great, that he obliged the emperor Sigismund to send an embassy to him, and to offer him the government of Bohemia. Such was his power of persuasion, that he could not only animate his men to the most desperate feats of valor, but likewise check them in the full career of victory, to prevent plunder and unnecessary bloodshed. A remarkable instance of this sort may be found in Varillas, where he relates, that nothing but the influence which Zisca possessed over the minds of his followers could have saved the city of Prague from utter destruction.

Several specimens of military eloquence may be found in Procopius. They possess the happy quality of being very short, full of good sense and strength of expression. Since the time of Henry the IVth, of France, we find few instances in which the generals of armies have thought it expedient to harangue their troops, unless we except the battle of Nerva, previous to which Charles the XIIth, king of Sweden, addressed his little army.

It frequently happens, however, that the commanding officers of corps and of detached parties, feel it necessary to encourage their men by short and appropriate speeches after the manner of the Lacedemonians. At the famous battle of Tory, Henry the IVth, of France, rode down the front of the line, and pointing to the white feather which he wore in his hat, spoke in the following emphatic manner to his soldiers: *My children,* (*mes enfans*) cried he, *should any mistake or irregularity occur among the standard bearers, and your colors by any accident be misled, recollect, that this feather will shew you where you are to rally; you will always find it on the road to honor and victory!*

At Fleurus, general Jourdan rode along the line with this short speech, "no retreat to-day." At Marengo Bonaparte addressed the soldiers, "remember we always sleep the night after victory on the field of battle." At Jena he told them—"There is Rosbach and a column commemorating French defeat, we must retrieve the honor of France, and plant a column dedicated to French glory." Admiral Nelson's address before the battle of Trafalgar, merits perpetual record,—"England expects every man to do his duty." The English ladies very significantly embroidered it on their garters.

HARASS, (*harceler*, Fr.) In a military sense, signifies to annoy, to perplex, and incessantly turmoil any body of men, to hang upon the rear and flanks of a retreating army, or to interrupt its operations at a siege by repeated attacks. The troops best calculated for this duty are hussars, mounted riflemen, and light dragoons. The general most celebrated among the ancients for this kind of warfare was Sertorius. By means of the most subtile and ingenious manœuvres, aided by a thorough knowlege of military tactics, he disconcerted all the plans, and finally defeated all the attempts which were made by Pompey and Metellus to subdue him. It has been shrewdly remarked by the commentator on Polybius, that had there been one Sertorius within the walls of Lisle, when that city was besieged in 1708, the whole combined force of the allies that was brought before it would have been rendered ineffectual. This wise and sagacious officer was constantly upon the watch; no movement of the enemy escaped his notice; and by being master of his designs, every measure which was attempted to be put in execution, was thwarted in its infancy.

When he received intelligence that a convoy was on its way to the enemy, such was his activity, that no precautions could save it from his attack; and however seemingly advantageous a temporary position might appear, every possible peril or surprize crouded upon his mind, and the instant he judged it necessary to decamp, such was his sagacity and shrewdness, that no foresight or information of the enemy could circumvent him on his march. He was full of expedients, master of military feints, and indefatigably active. When pursued in his retreats, he had always the ingenuity to avoid his enemy by getting into inaccessible places, or by disposing of his troops in such a manner, as to render it extremely hazardous to those who might attempt to harrass or perplex him

HARBOR, in military architecture, a port or haven for shipping. The making and inclosing harbors with piers, so as to resist the winds and waves, for the preservation of ships in stormy weather, is one of the most useful and necessary works that can be made in a trading nation; since the security of their wealth and power depends greatly upon it. Hence it should be the particular study of every young engineer, who is desirous of being useful to his country, or of distinguishing himself, to render himself master of this branch of business. The works principally recommended to his attention are *L'Architecture Hydraulique*, par M. Belidor; *Essai sur la Resistance des Fluides*, par M. d'Alembert, Maclaurin, and Muller.

HARCARRAH. In India, a messenger employed to carry letters, and otherwise entrusted with matters of consequence that require secrecy and punctuality. They are very often Bramins, well acquainted with the neighboring countries; they are sent to gain intelligence, and are used as guides in the field.

HARDI, *Fr.* In French architecture, an epithet which is frequently attached to those sorts of works that, notwithstanding their apparent delicacy of construction, their great extent and wonderful height, remain uninjured for a succession of years. Gothic churches are of this description.

HARE, an old Saxon term for an army.

HARNESS, armor, or defensive furniture of war. Also the traces for horses of draught.

Harness. For men in the light artillery, one set, 26 lbs. length 12 feet. Wheel harness for a pair of horses, such as was used in the service of artillery, about 1 cwt.

HARNOIS, *Fr.* harness. This word was formerly used among the French to signify the complete armor or equipment of a horseman, including the cuirass, helmet, &c The term, however is still adapted in a figurative sense: as, *Cet ancien officier a blanchi sous le harnois—This old officer has grown grey beneath his harness, or equipment*; signifying that he has grown old in the service.

Harnois *du Cheval*, Fr. Military equipment for a horse. There are some curious remarks on this subject in the *Reveries de Mareschal Saxe.*

HARO, *Fr.* hue and cry..

HAROL. An indian term signifying the officer who commands the van of an army. It sometimes means the vanguard itself.

HARPE, *Fr.* a species of draw-bridge, which was used among the ancients, and which obtained the name of harp from its resemblance to that instrument. This bridge, which consisted of a wooden frame, and hung in a perpendicular direction against the turrets that were used in those times to carry on the siege of a place, had, like the harp, a variety of ropes attached to it, and was let down upon the wall of a town by means of pullies. The instant it fell the soldiers left the turret and rushed across the temporary platform upon the rampart.

HARQUEBUS, a kind of fire-arm, of the length of a musquet, usually cocked with a wheel. It carried a ball of about 3 ounces. Not used at present.

HARQUEBUSEIR, a soldier carrying a harquebus.

HARROW, to lay waste, to ravage, destroy.

HASTAIRES, *Fr.* soldiers armed with spears. See HASTATI.

HASP, a flat staple to catch the bolt of a lock.

HASTATI, from the Latin word *basta*, a spear; so that they may literally be called spearmen. A body of Roman soldiers who were more advanced in age, and had acquired a greater reputation in arms than the *Velites* possessed, were distinguished by this appellation. They wore a complete set of armor, and always carried a buckler, made convex, measuring two feet and a half in breadth and four in length. The longest contained about four feet nine inches, or a Roman palm. The buckler was made of two boards glued together. These were covered, in the first instance, with a broad piece of linen, which was again covered over with sheep's skin. The edges, both at top and bottom, were fenced with iron, to enable them to meet the broad sword and sabre, and to prevent them from rotting when planted on the ground. The convex part was further covered over with iron plates to resist the impression of hard blows, and to withstand the violent concussion of stones, &c.

The *bastati* likewise wore a sword, which they carried girted to their right thigh, and which was called the Spanish sword. This weapon was calculated both to cut and thrust, the blade being very broad, thick, and pointed. Each had moreover two pikes, a brass helmet, and half boots. One of the pikes was thick, and the other of a middling size, and they were in general either round or square. The round ones were four fingers diameter, and the square ones contained the breadth of a side. The small pikes were not unlike to the darts which the hastati, or spearmen, were still obliged to carry. The pole or staff of these pikes, whether large or small, was nearly five cubits long. The iron which was made somewhat in the shape of a fish-hook and was fixed to the pole, contained the same length. It reached beyond the middle, and was so well nailed that nothing could loosen it without at the same time breaking the pole. This iron was one finger and a half thick, both at the bottom, and at the part where it was joined to the wood.

The hastati or spearmen wore upon their heads a red or black plume, consisting of three straight feathers, each measuring one cubit in height. These, added to their other accoutrements, made them appear uncommonly tall, and gave them a bold and formidable look. The lowest class of hastati, or spearmen, had their chests protected by a piece of brass, containing twelve fingers' breadth every way. This plate was called a *breast-plate*. All that were worth 10,000 drachmæ wore a coat of mail, instead of a breast-plate.

Kennet, in his R. Ant. p. 190, gives a similar account of the hastati; and adds, that the spears were afterwards laid aside as incommodious.

*Armes d'*HASTE, *Fr.* long-hafted weapons.

HASTE, *Fr.* The piece of wood or long pole to which the standard is fixed, was formerly so called in France.

HASSEIN and HOUSSEIN, two brothers, and Mahomedan saints, whose feast is celebrated with great pomp and much enthusiasm in Asia. This festival is kept on the 14th of November, in commemoration of the murder of those two brothers. The Mahomedans of Hindostan observe it with a kind of religious madness, some acting and others bewailing the catastrophe of their saints with so much energy, that several die of the excesses they commit. They are likewise persuaded that whoever falls in battle against unbelievers, during any of the days of this ceremony, shall be instantly translated into the higher paradise, without stopping at any of the intermediate purgatories. On these occasions, to the enthusiasm of superstition is added the more certain efficacy of inebriation; for the troops eat plentifully of bang, a vegetable substance something like hemp which yields an intoxicating juice.

HAT. Hats are no longer used by the non commissioned officers or privates; in the European armies all the infantry wear caps of leather, &c.

HATCHET, used in the army, a small light sort of an axe, with a bazil edge on the left side, and a short handle, used by the men for cutting wood to make fascines, gabions, pickets, &c.

To take up the HATCHET, among the Indians to declare war, to commence hostilities, &c.

HAUBERGEON, *Fr.* See HABERGEON.

HAUBERGIER, *Fr.* an individual who held a tenure by knight's service, and was subject to the feudal system, which formerly existed in France, and by which he was obliged to accompany the lord of the manor in that capacity whenever the latter went to war. He was called *fief de baubert*, and had the privilege of carrying a halbert. All vassals in ancient times served their lords-paramount as squires, haubergiers, lance-men, bow-men, &c.

HAUBERJON, *Fr.* See HABERGEON.

HAUBERT. See HAUTBERT.

HAVERSACK, a kind of bag made of strong coarse linen, to carry bread and provisions on a march. It is only used in the field and in cantonments, each soldier having one.

HAVILDAR, or HAVILDAUR, a non-commissioned officer or serjeant among the East India sepoys. He ranks next to the Jemidar.

HAVOCK, carnage, slaughter.

HAVRESAC, *Fr.* See HAVERSACK.

HAUSSE-*col*, Fr. an ornamental plate similar to the gorget. It is worn by infantry officers only.

Un HAUSSE-*cou*, Fr a neck piece.

HAUT-LE-PIED, *Fr.* a term used to distinguish such persons as were formerly employed in the French armies without having any permanent appointment. *Commissaires hauts-le-pied* were known in the artillery during the monarchy of France. They were usually under the quarter-master general.

Le HAUT *Rhin*, Fr. the Upper Rhine.

Le HAUTE *Saxe*, Fr. Upper Saxony.

HAUTBERT, *Fr.* a coat of mail, which covered the neck and arms, formerly worn by the *seigneurs de haubert*, or lords-paramount, in France, in lieu of the *hausse-col*, *brassarts*, and *cuissarts*.

HAUTBOY, (*hautbois*, Fr.) a wind-instrument, now almost universally adopted by the European armies, and which forms a part of the regimental bands.

HAUTES-*payes*, Fr. were soldiers selected by the captains of companies to attend them personally, for which service they received something more than the common pay. *Haute-paye* became afterwards a term to signify the subsistence which any body of men superior to, or distinguished from the private soldier were allowed to receive.

HAUTEUR, *Fr.* in geometry, signifies elevation.

HAUTEUR, *Fr.* in architecture, the extreme height of any building. Thus, *un bâtiment est arriveé à hauteur* signifies that the last stones or bricks are laid ready for the roof to be covered in.

HAUTEUR *d'appui*, Fr. breast-hight.

HAUTEUR *de marche*, Fr. The usual height which a man takes in stepping, being about six or seven inches above ground.

HAUTEUR *d'un escadron, ou d'un bataillon*, Fr. the depth of a squadron of horse, or battalion of foot. The word *hauteur* in the French service is equivalent to depth in the English: as—an army consisting of many squadrons of horse and battalions of foot, one in front of the other and forming several columns, is said to stand that number of columns deep; the term being applicable in all services to the army collectively or separately considered from several columns to a mere rank and file.

HAUTS-*officers*, Fr. superior officers. With respect to an army composed of several regiments, the following fall under the description of *hauts officiers* according to the old French system: generals, lieutenant-generals, colonels, and lieutenant-colonels. The *hauts-officiers*, or superior officers in distinct corps, were majors, aid-majors, captains, lieutenants, sub-lieutenants, and ensigns.

HAYE, *Fr.* a military disposition in which soldiers stood aside one another on a straight line. *Se mettre en haie*, is to stand *rank entire*. *Faire un double haie*, to stand *two deep*. *Border la haie*, is a disposition to which infantry has recourse when attacked by cavalry. See BORDER LA HAYE.

HAZAREE, an East Indian term signifying a commander of armed men.

HEAD, in gunnery, the fore part of the cheeks of a gun or howitz carriage.

HEAD *of a work*, in fortification, is the front next to the enemy, and farthest from the place; as the front of a horn-work is the distance between the flanked angles of the demi-bastions: the head of a double tenaille is the salient angle in the centre, and the two other sides which form the re-entering angles. See FORT.

HEAD *of an army, or body of men*, is the front, whether drawn up in lines, or on a march.

HEAD *of a double tenaille*, the salient angle in the centre, and the two other sides which form the re-entering angle.

HEAD-*piece*, armor for the head; an helmet, such as the light dragoons wear.

HEAD-*of a camp*, the ground before which the army is drawn up.

HEAD-QUARTERS, the place where the officer commanding an army or independent body of troops takes up his residence.

HEADSTALL, that part of the bridle which goes over the horse's head.

HEAUME, Fr. A word derived from the German, which formerly signified *casque*, or helmet. The *heaume* has been sometimes called among the the French *salade*, *armet*, and *celate* from the Latin word which means *engraved*, on account of the different figures which were represented upon it. The *heaume* covered the whole of the face, except the eyes, which were protected by small iron bars laid cross-ways.

The heaume was not only worn by the chevaliers or knights when they went to war, but also at tilts and tournaments. It serves as an ornament or helmet in coats of arms and armorial bearings. Various appellations have been given to this piece of armor, such as *habillement de tête*, covering for the head, casque, helmet; and under Francis I. it was distinguished by the name of *armet*. It does not resemble the *morion*, the *salade*, or headpiece, the *pot*, or *bourgignote*, burganet, which were worn only in the infantry. The *heaume*, as we have observed above, covered the face. There was an opening opposite to the eyes which was guarded by small iron bars, or latice-work, and was a kind of visier. The *heaume*, or helmet, is still preserved in heraldry, and is a distinguishing mark of nobility. In tournaments, the helmet was presented as a prize of honor to the most active champion, because it was the principal piece of defensive armor; but a sword was given to the assailants, as that was an offensive weapon.

HEBDOMADIER, *Fr.* The person whose week it is to be on duty.

HELEPOLIS, in the ancient art of war, a machine for battering down the walls of a place besieged. The invention of it is ascribed to Demetrius the Poliorcetes. Diodorus Siculus says, that each side of the helepolis was 450 cubits broad, and 90 in height; that it had 9 stages or floors, and was carried on four strong solid wheels, 8 cubits in diameter; that it was armed with huge battering rams, and had 2 roofs capable of supporting them; that in the lower stages there were different sorts of engines for casting stones; and in the middle, they had large catapulta's for lancing arrows.

HELICOMETRY, an art which teaches how to draw or measure spiral lines upon a plane, and shew their respective properties.

HELIOID *parabola*, is a curve arising from the supposition of the axis of the Apollonian parabola, being bent into the periphery of a circle, and is then a line passing through the extremities of the ordinates, which converge toward the centre of the circle.

HELIOSCOPE, a prospect glass to view the sun. The glass is colored in order to weaken the radiance of light.

HELIX, a spiral line.

HELM, or **HELMET**, an ancient defensive armor, worn both in war and tournaments. It covered both the head and face, only leaving an aperture in the front, secured by bars, which was called the visor. The Carians first invented the boss of shields and the crest of helmets. In remembrance of this, a small shield and a crest were always buried with them.

HELMET-CAP, **HELMET-HAT**, a cap, or hat, the crown of which is shaped like the dragoon helmet.

HELVE, or **HAFT**, the wooden handle of a hatchet, hammer, or pick-axe.

To **HEM** *in*, to surround.

HEMERODROMES, *Fr.* a French term taken from the Greek, signifying sentries or guards, which were employed among the ancients to protect and watch over fortified towns and places. As soon as the gates were opened they went out, and continued to patrole round the skirts of the town during the whole of the day. Frequently, indeed they advanced considerably into the country, in order to discover whether any hostile body of men was approaching in order to surprize the garrison.

HENDECAGON, a figure that has 11 sides and as many angles, each capable of a regular bastion.

HINDOO, or **HINDU**, the name by which the natives of Hindustan distinguish themselves from the inhabitants of other countries.

HEPTAGON, a figure consisting of seven sides and as many angles. If the sides be all equal, it is called a *regular heptagon*.

HEPTAGONAL *numbers*, are a sort of polygonal numbers, wherein the difference of the terms of the corresponding arithmetical progression is = 5. One of the properties of these numbers is, that if they be multiplied by 40, and 9 be added to the product, the sum is a square number.

HEPTARCHY, a government which consisted of 7 kings or sovereign princes. Such was the government under which England was ruled by the Saxon kings.

HERALD, an officer at arms, whose duty is to declare war, to proclaim peace, or to be employed in martial messages. The heralds in England are judges and examiners of that ridiculous jargon called heraldry, or coats of arms; they marshal all solemnities at the coronations, and funerals of their princes, &c. The origin of heralds is extremely ancient. It is reported that the Greek herald, Stentor, possessed such a powerful voice that it exceeded the united clamor of fifty men.

There are three heralds called kings at arms in England, each bearing a name peculiar to himself, and six heralds. The first king at arms is that of Garter, created by Henry V. that of Clarencieux, created by Edward IV. and that of Norroy, so called from the exercise of his functions north of the river Trent,

The heralds extraordinary are those of Windsor and Chester, created by Edward III. those of Somerset by Henry VIII. and those of York and Lancaster, created by the children of Edward III. They are pageants and sinecures.

HERALDS *College*, a corporation in England which consists of kings at arms, heralds, and pursuivants, in which the nonsense of heraldry is recorded.

HERAUT. *Fr.* herald. During the old monarchy of France there were thirty heralds each distinguished by the name of some particular province. The first of these who was king at arms, bore the title of *Montjoy St. Denis*: he had the privilege of wearing a royal coronet over the fleur de luce. On solemn occasions the king and the heralds at arms appeared in their coats of arms made of violet colored crimson velvet, with three golden fleurs de luces before and behind, and as many on each sleeve where the name of the province stood, to which the herald belonged. They wore a black velvet cap ornamented with golden strings, and half boots, when they appeared on peaceable occasions, with whole boots on warlike or martial ones. In solemn funerals they had a long robe of black velvet. The only difference between the king at arms and the heralds with respect to dress, consisted in the richness of the embroidery, that of the former being more expensive. The coats of arms which were peculiar to the heralds were called *Plaques*, those of the kings at arms were distinguished by the name of *Tunict*. They carried a stick called *Caduceus* (such as Mercury is represented to have borne in ancient mythology.) But this stick was not ornamented by a crown with fleurs de luce, it was only covered with crimson velvet, having a few fleurs de luce scattered here and there.

There was likewise a herald, whose particular functions were to carry the king's orders. He was entitled to a coat of arms upon violet colored velvet, interspersed with fleurs de luce and gold embroidered flammes or pendants, together with the arms and collars both before and behind. He likewise wore the cross belonging to the order which was attached to a black silk cord borne crossways.

The author of the Dictionnaire Militaire derives the French term *Heraut* from the German *Hérald*, which signifies a man at arms, *un Gendarme*. Verstegan derives it from the Saxon. Other French writers derive it from an old Gallic word *barou*, or *bara*, which was used as a challenge, a notification of fresh hostilities, a ban or general assembling of the people, a loud and public proclamation of battles fought and victories obtained; on which account heralds, according to Ducange, were formerly called *Clarigavis* as well as *Heraldus*.

HERCOTECTONIQUE, *Fr.* a term in fortification signifying that branch of Military architecture which specifically points out the best means of defence and the surest method of providing stores. This word is derived from the Greek.

HEREFARE, an old term from the Saxon, signifying the same as warfare

HEREGELD, a term derived from the Saxon, signifying a tax which was formerly levied for maintaining an army.

HERESLITA, } a term derived from
HERESILIA, } the Saxon, signifying a soldier who abandons his colors, or leaves the army without leave.

HERETEQ, } a term derived from the
HERETOQ, } Saxon, signifying the
HERTZOG, } leader of an army, a Duke, the same as *dux* in the Latin.

HERETUM, a court in which the guards or military retinue that usually attended the old British nobility and bishops were accustomed to parade or draw up.

HERISSON, *Fr.* a turnpike which is made of one stout beam that is fenced by a quantity of iron spikes, and which is fixed upon a pivot, in the manner that turnstiles are, so that it can turn in every direction.

Herisson, (*foudroyant*, Fr.) a sort of artificial firework which has several sharp points attached to it on the outside, and is filled with inflammable composition within. It is frequently used in breaches and retrenchments.

HERGATE, a term derived from the Saxon, signifying a tribute which was paid in ancient times to the lord of the soil, to enable him to carry on a war.

HERO. This name was given by the ancients to those men who became illustrious in war, and who were stiled Demi-Gods, from a general notion, that their actions entitled them to a place in heaven immediately after their decease.

The heroes of antiquity were divided into two classes, the one of mortal genealogy, the other of heavenly descent, being the offspring of some god or goddess who had connexion with the human species.

Modern authors make a distinction between a hero and a great man; the former appellation being given to one who distinguishes himself by feats of hardihood in military enterprize, and the latter to a person eminent for his virtues and extraordinary talents in civil life.

HEROINE, a term generally applied to women who have given extraordinary proofs of courage and virtue.

HERRISON. See Herisson.

HERSE, in fortification, a grated door formed by strong pieces of wood, jointed cross-ways like a lattice or harrow, and stuck full of iron spikes. It is usually hung by a rope and fastened to a molinett, which is cut in case of a surprise, or when the first gate is forced by surprise or with a petard, to the end that it may fall and stop the passage of a gate or other entrance of a fortress.

These herses are also often laid in the roads, with the points upwards instead of the chevaux-de-frize, to incommode the march of both horse and foot. Common harrows are sometimes made use of in cases of emergency, with their points upwards.

HERSILLON, a strong beam, whose sides are stuck full of spikes, which is thrown across the breach made by an enemy to render it impassable.

HESSIAN, a substitute, a deputy, one employed to do base or dirty work for another.

HESSIANS, troops belonging to the country of Hesse-Cassel in Germany. They have been frequently hired by Great Britain, particularly in the war of American independence, when they were sold at 40*l.* sterling a head; nine pounds of which was to be repaid if they returned alive. Hesse has been since made subject to France, forming part of the kingdom of Westphalia.

HETMAN, *Fr.* sometimes called Atteman, a word derived from the German, which signifies the *head-man*, the chief of a troop. The chief general or grand general in Poland is called *Hetman Wielki*, and the second general *Hetman Polny*.

The chief or general of the Cossacks is likewise invested with this title by the sovereigns of Russia.

HEURTEQUINS, *Fr.* two pieces of iron resembling a knocker, which are placed over the trunnions, or axis of a cannon.

HEXAEDRON, (*Hexaedre*, Fr.) a solid geometrical figure, consisting of six equal sides.

HEXAGON, a figure of 6 sides and as many angles, capable of being fortified with 6 bastions. If the sides and angles be equal, it is called a regular hexagon. The side of a regular hexagon inscribed in a circle, is equal to the radius of that circle; hence a regular hexagon is inscribed in a circle, by setting the radius of 6 times upon the periphery: as 1 to 1. 672, so is the square of the side of any regular hexagon to the area therefore, nearly.

Tanned HIDES, are always carried along with an army, especially in the laboratory's stores, to protect powder or shells from rain; they are also used in batteries and in laboratories.

HIERARCHY, church government.

HIEROGLYPHICKS, (*hieroglyphes*, Fr., certain mysterious characters of creatures or letters used among the Ægyptians, by which they explained to one another the principles of their religion and their maxims of philosophy, without divulging them to strangers. Arbitrary signs which represent things: the signs used in almanacs for the planets and other phenomena are hieroglyphicks.

HIGHLANDER, any person from a mountainous country.

HIGHLANDERS, the people of the north of Scotland, who wear a dress peculiar to themselves.

HILT, the handle of a sword.

HINGES, are two iron bands, with a joint, nailed to the doors or lockers of gun carriages to fasten them and move them backwards and forwards.

HINGUET, *Fr.* See GINGUET.

HIPPODROME, *Fr.* a French term derived from the Greek, signifying a spot where horses used to run, properly speaking a race-ground. The Hippodrome or course at Constantinople was much celebrated in ancient days. The spot still exists under that name.

HIRCARRAH, or HIRCARRA, an Indian term for a messenger, guide, footman, or spy.

HISTORY, a narration or description of the several transactions, or events of a state, king, or private person, in the order in which they happened.

Military HISTORY, a narrative of military transactions, campaigns, battles, sieges, marches, &c. of an army: likewise a relation of the heroic actions of great generals, &c.

HIVERNER, *Fr.* a sea phrase among the French signifying to winter.

HOCHEBOS, *Fr.* certain soldiers among the ancients, who were so called from their brandishing the pike. This word has likewise been applied to the pike itself.

HOG' HEADS, filled with earth, sand, &c. are sometimes used in lieu of gabions, to cover men.

HOLD. See FASTNESSES.

To HOLD *out*, to maintain any place, ground, &c. resolutely against an enemy.

HOLLOW *square*, the form in which a body of foot is drawn up, with a vacant space in the middle for the colors, drums, baggage, &c. See SQUARE.

HOLLOW *tower*, a rounding made of the remainder of two brisures, to join the curtain to the orillon, where the small shot are played, that they may not be so much exposed to the view of the enemy.

HOLLOW *way*, any pass or road, both sides of which are commanded by heights.

HOLSTERS, cases for a horseman's pistols, affixed to the pommel of the saddle.

Order of the HOLY-GHOST, formerly the principal military order in France, instituted by Henry III. in 1569. It consisted of 100 knights, who were to make proof of their nobility for three descents.

HOME-SERVICE consists in military operations and arrangements for the immediate defence of our own country, should it be threatened by invasion, or by domestic broils or insurrections.

As there is a great affinity between the following general regulations for home-service, and those that are generally prescribed for foreign, we have thought it right to class the whole, including carriages, baggage, &c under one head.

The carriages allowed, if circumstances will permit, to be with each regiment of infantry, of 10 companies at 80 each, are

3 Bread waggons; each to carry 4 day's bread for 400 men, or 2400lb.

2 Ammunition caissons.

2 Battalion guns.

1 Waggon spare.

1 Cart with entrenching tools.

2 Sutler's carts.

1 Waggon for sick; or more as may be permitted.

The carriages allowed to be with each regiment of cavalry, of 10 troops of 76 each, are

3 Bread waggons; each to carry 4 day's bread for 400 men, or 2400lb.

2 Ammunition caissons.

2 Sutler's carts.

2 Forage carts.

2 Carriages for sick.

Regiments on lower establishments to be allowed carriages in proportion to their effective strength.

The carriages of the general officers allowed with or near the column of the army will be: for lieutenant-generals, 1 chaise and 2 carts—for major-generals, 1 chaise and 1 cart.

The carriages of head quarters will be exceedingly limited by th. commander in chief.

All other private carriages whatever to be considered as belonging to the heavy baggage of the army, and ordered to a great distance in the rear, and if at any time found near the army, to be ordered to be destroyed by the baggage-master general.

All other baggage therefore, whether tents, blankets, or necessaries for the officers, to be carried on bat horses.

The number of horses which officers of each rank may have in common situations in the field, to be specified by regulation. But as it is impossible in any service that may occur, to calculate for the carriage or use of large tents, or other conveniences which officers are generally allowed when in the field; it is always recommended to each officer to make his arrangements for moving in the lightest manner possible.

The personal baggage of each officer must be contained in a small portmanteau. One small tent is all that the officers of each company or troop should calculate upon. To carry the above, blankets, provisions, 3 or 4 days grain and other useful necessary articles, 2 bat horses per troop or company will be sufficient.

The bat horses of each regiment of infantry of 10 companies, at 80 each, should therefore be,

For the tents and poles of the regiment	20
For the company officers - -	20
Field officers and staff - -	4
Surgeon's chest - - -	1

Regiments on a lower establishment, allowed bat horses in proportion.

The bat horses of each regiment of cavalry of 10 troops of 75 each, will therefore be,

For the tents and poles of the regiment	20
For the troop officers - -	20
Field officers and staff -	6
Entrenching tools - -	2
Surgeon's chest - -	1

and in proportion for regiments on a lower establishment.

The infantry to carry tents at the rate of 16 men per new tent, and the cavalry 12 men per tent. The necessary outlying guards and detachments, and the readiness of hutting and other cover that a woody country affords, will make this a sufficient number. The troop and company bat horses can therefore easily carry the tents, poles, and pins. The blankets of the cavalry may be divided and carried under the men's saddles. The blankets of the infantry must be divided and carried by the men, unless some other provision be made.

The picket ropes of the cavalry to be carried on the bat horses. Half the usual number of pickets must be considered as sufficient, and be carried by the men. The camp kettles will be carried by the men, if horses are not provided for that purpose.

A reduction and critical inspection of what every soldier should carry as his baggage should be made in time, and every thing superfluous destined to be lodged with the heavy baggage, which should remain in the last quarters of the regiment, till otherwise ordered to be disposed of. Three shirts, 2 pair of shoes 2 pair of pantaloons, 2 pair of socks, a fatigue frock and cap, combs, brushes, (and a horseman what is necessary for the care of his horse) is all a soldier ought to carry.

The heavy baggage of the army, including every thing not mentioned above, under a proper escort, should be ordered to some place of security. Each regiment of infantry will be allowed to send a serjeant and 6 men, and each regiment of cavalry 1 corporal and four dismounted men as a guard; such men must be the least fit for marching duties, but should be fully adequate to the service, and by no means convalescents recovering from long indisposition. Proper officers should be ordered to command the whole, and no part of this baggage will be allowed to join the army but by public orders. If at any time carriages not allowed in this regulation should be found in the army, they must be conducted to head quarters, and there destroyed or confiscated to the advantage of those who make the discovery.

Four battalion guns with two waggons will be attached to each regiment of infantry. Should it be necessary, two bat horses will be allowed for the artillery detachment.

Such artillery as remains in the park to be limited as to the number of guns, carriages, and according to the specification given to the commanding officer of the artillery.

The bat men allowed are two for each company and troop, also two for the surgeon and staff of each regiment.

Each battalion to give a non-commissioned officer and 8 men; each regiment of cavalry to give a non-commissioned officer and 6 men, as a guard to their bat horses.

The following number of men on the several after-mentioned duties of the regiment will never exceed

	Infantry.		Cavalry.	
	Non-com.	*Men.*	*Non-com.*	*Men.*
Camp color-men	2	10	2	8
Bat horse guard	1	4	1	3
Bread carriage guard	1	4	1	2
Heavy baggage	1	6	1	4
Regimental carriages	1	4	1	3
Allowed bat men	0	22	0	18
	6	52	6	48

Each regiment of infantry will receive 20 pick-axes, 20 spades, 20 shovels, 40 bill-hooks, 10 axes, amounting in weight to about 400lb. These tools to be carried in the cart allotted for that purpose, and that cart at all times, and in all situations, to march at the head of the regiment.

Each regiment of cavalry will receive 10 pick-axes, 10 spades, 10 shovels, 16 bill-hooks, and 10 axes. These tools will be carried on horseback, and on a horse with hampers allotted for that purpose, and will at all times march at the head of the regiment.

These tools are meant to be ready at all times for making the openings so necessary in an embarrassed country, consequently should be kept in the front of each regiment or column.

Spare appointments and arms of every kind must of course remain with the heavy baggage.

The battalion guns will always march at the head of the regiment, which ever flank leads. The ammunition waggons and carts will immediately follow the troops of the column.

The place of march of the artillery of the park and carriages will be specified in the order of march.

It is to be wished, that at all times each soldier be provided with 4 days bread in his haversack, and 4 days more carried in the regimental carriages. When this is delivered out, those carriages, under the guard of a serjeant and 4 men per battalion, and a corporal and 2 men per regiment of cavalry, will be sent to the bakery to be again loaded.

Each infantry soldier will always carry 20 rounds in his pouch, and 40 in his knapsack or magazine. Each horseman his cartouch box full.

The cavalry will always carry 2 days grain if it can be got, and hay according to circumstances.

Order of March.

When a corps moves in one column, the following will in general be the order of march, if not otherwise ordered, and exclusive of the more particular van or rear guards.

Advancing.

Advanced guard consisting of the picquets of the infantry and cavalry, and new grand guard, followed by the camp-color men.

Pioneers.

1 Reg. light dragoons.

Infantry.

Cavalry

Regimental ammunition waggons and carts.

Bat horses in the order of their regiments, artillery of the park.

General officers' carriages, bread carriages.

Cavalry forge cart and ammunition cart.

Sutlers' carts.

Sick carriages.

Squadron of cavalry.

Old grand guard and small out-posts and detachments which will be ordered to join it, will form the rear guard.

Retreating.

Advanced guard consisting of the new grand guard, guard for head quarters, one infantry picquet, camp color-men.

Pioneers.

Sick carriages.

Sutlers' carriages.

Cavalry forge carts and ammunition cart.

Bread carriages.

General officers' carriages.

Artillery of the park.

Bat horses in the order of their regiments.

Regimental ammunition waggons and carts.

Cavalry.

Infantry.

1 Squadron light dragoons.

Rear guard consisting of the infantry and cavalry picquets, old grand guard, out-posts of cavalry or infantry ordered to join.

Two or more pieces of cannon will always march with the advanced guard when retiring.

When the tents are ordered to be struck, the advanced guard and camp color-men will always assemble at the head of the regiment of infantry in advancing, or of the cavalry in retiring, which leads the columns, or of such regiment as will be specified when marching in more columns than one. The general officers will each send a proper person with the camp color-men, to take possession of quarters when they can be marked.

When the army marches in more than one column, the columns will generally be composed of both cavalry and infantry; the particulars of rear and advanced guards will be specified, the generals who command them will be named, and the particular corps in the manner they follow in each column. It is always the business of general officers leading columns, to take care that every part of that column falls properly into its place of march.

When the army marches from its left, every regiment marches from its left; and when the army marches from its right, every regiment marches from its right.

When the army retires, the carriages, except such artillery ones as are specified, will in general be ordered under a proper escort to precede the march of the army.

When the army is to march, the particular detail and disposition of march will not always be given out in public orders. Should the only notice given be, the army will march the——exactly at ——o'clock; an hour before the time fixed for the march, the tents must be struck; the regiments will then form, and the baggage be loaded and ready in the rear of each.

Guides will be sent to the head of the regiments that lead columns and a sealed disposition of march, there to be opened by the general or oldest field officer present. In consequence of which, by him the advanced guard will be ordered to form; the regiments and carriages to close in to the leading regiments, according to the order of march, and when the whole are ready, the column, or columns, will move off in the manner then prescribed, and at the appointed hour.

In general a rendezvous will be appointed for the bat horses and carriages, that they may the more readily be directed into the line of march.—One subaltern per brigade will attend the bat horses; one subaltern per brigade will attend the carriages.

The aids-de-camp and majors of brigade will always regulate their watches by head quarters, at orderly time, that regularity of movement in the troops may be observed.

Commanding officers of battalions, squadrons, and brigades of artillery, will be responsible that they are formed, tents struck, and the baggage loaded in half an hour, from the time that the signal for the march was given them, and for this purpose it is necessary that they should exercise their men to it where they have opportunities.

The battalions are to march by subdivisions, and the cavalry by subdivisions, or ranks by three's or two's. If the narrowness of the route obliges them to diminish this front, they must be ordered to form up again as soon as the route permits.

Every officer must remain with his division, and never quit it on any account. No soldier to be permitted to leave his rank. No horses or carriages suffered to interrupt the march of the column. The distance between divisions never to exceed the front of divisions. Commanding officers of brigades will take care that the battalions and squadrons march at their proper ordered distance. When the formation in order of battle may be expected to the flank, the divisions will march at wheeling up distance; when the formation may be expected to the front, the divisions will march at half or quarter distance. Officers on command will remain with their brigades, and punctually observe the order of march, and the execution of every article prescribed.

If a carriage breaks, it must be drawn aside, the road cleared, and a proper escort left with it, that the march of the column be not interrupted. If it can be repaired in time, it will follow; if not, the loading must be divided among the nearest carriages, who are hereby ordered to give this reasonable assistance.

The troops at most may march three miles in an hour and a quarter.

The guides serve only to shew the way for the columns; pioneers ordered must make the necessary openings and repair the roads. But the generals must not trust to those precautions, they must gain the most exact knowlege of the route they are to march, and themselves reflect on the most proper means to avoid all difficulties that may embarrass the march.

It is always time well employed to halt the head of a column, and enlarge an opening or repair a bad step in the road, rather than to diminish the front and lengthen out the line of march.

No individual is ever to presume to march on a less front than what the leader of the column directs, and all doublings therefore must come from the head only; and the proper closeness of the march on all occasions, is a point of the highest consequence, and it is a most meritorious service in any officer to prevent all unnecessary doublings, or to correct them as soon as made, and on all occasions whatsoever, in an inclosed country, when in column, to march on the greatest front the roads or openings will allow, although the regiments or divisions before them may be marching on a narrower front.

The carriages must be obliged to march two a breast when the roads will allow, and the bat horses to be as connected, and take up as little space as possible. In short, it should be the study and attention of every one to contract the line of march to its just length, for notwithstanding every possible exertion it will be much too extended.

Whenever the baggage is ordered to be sent away, all carriages whatever are comprehended, except such as are particularly specified.

The instant that a regiment comes to its ground, it must make openings of communication both to its front and flanks.

The line of carriages must at no time stop, whatever accident may happen to any individual one, but such carriage must instantly be drawn on one side, and repaired if possible, while the rest proceed The officers commanding the several divisions of carriages will be answerable for the strict observance of this article, a failure of which might stop and endanger the whole army.

Whenever the regiments encamp, or take up any extended position in front, it will always be the business of commanding officers to find out, and to make the most convenient passages to the great routes by which the column is afterwards to march. And on many occasions, where there will not be time to open and occupy an extensive front, the army will encamp parallel to and along the great route, covered by an advanced corps on the flank next the enemy.

At all times when commanding officers see, that there are likely to be impediments from the nature of the ground to the movements or march of their regiments, they should always detach officers in advance to reconnoitre and point out the means and passages by which such obstacles are to be avoided, and at no time are such helps so necessary as when regiments are acting in line in broken ground, and when their movements are combined with those of others.

Whenever the army moves, the majors of brigade are made responsible, that all advanced and detached posts are called in at the proper times to their places in the column of march.

It must be observed that this is the old British system of march; the war of the

French revolution has brought this part of the art of war to a degree of perfection, which would have rendered the insertion of this unnecessary if their system were published

HOMME, *Fr.* a man.

Homme *de mer*, Fr. a seaman.

Homme *d'armes*, Fr. a military phrase among the French, signifying a gentleman or cavalier who belonged to one of the old companies, was armed cap-a-pied, and always fought on horseback. In ancient times every man of this description was accompanied by two horsemen independent of his servants. One of the mounted attendants was armed with a cross-bow, and the other with a common bow or battle-axe; so that one hundred *hommes d'armes* composed a body of three hundred horse. It was a species of cavalry which existed from the reign of Louis XI. until the reign of Henry II. Charles VII. had begun to form the French nobility into regular corps of cavalry, dividing them into different troops. Out of these he established a body of fifteen hundred *hommes d'armes* or armed bowmen, and he gave the troops or companies according to their sizes, to the princes and most experienced captains in his kingdom. For particulars we refer the curious to Le Gendre and Gaia, *Traité des armes*, L. 14, and to Fauchet, L. 2. C. 1. *de son Traité de la milice et des armes*.

Etre **Homme** *de Cheval*, Fr. a term in French equitation, signifying, that a man is completely master of his horse, or knows how to manage him thoroughly and according to prescribed rules and regulations. Thus *Il est suffisamment homme de cheval pour n'etre point embarrassé de celui qu'il monte en commandant sa troupe*—He is sufficiently master of his horse, or he is horseman enough, not to be in the least embarrassed by the one he rides in exercising his troop.

HONDEAAN or **HUNDYVEAAN**, an Indian term signifying commission on bills of exchange.

HONEY-*Combs*, in *cannon*, flaws in the metal, a fault in casting, which renders it extremely dangerous in firing. The British board of ordnance rejects all guns (on proof) having an honey-comb of 1-9th of an inch deep, as being unfit for service.

HONI *soit qui mal y pense*, Fr. evil be to him that evil thinks. The motto of the English order of the Garter.

HONNEUR, *Fr.* honor.

Honneurs *Militaires*, Fr. military honors. It was directed by a general instruction in the French service, that whenever an officer saluted or paid a military honor to a general officer, he should make his troop or company invariably face towards the enemy. The same practice prevails in our service.

Honneurs *funebres*. Fr. funeral honors. See **Burials**.

HONOR, in a *military sense*, is an expression, to which custom has given different meanings. Honor consists in the constant practice of virtue. Aristotle calls it the recompence of virtue; the testimony of the excellence of a man who distinguishes himself by virtue. An Italian writer calls it a state of inviolable dignity, above all calumny, and all suspicion. Honor gives many advantages: it procures us the consideration of the public; it advances our fortunes. The best recompence of a brave action is, undoubtedly, the satisfaction of having done it; but nevertheless the honor resulting to us from it is a real good, which should be dear to us.

Honor, in a general acceptation may be properly called a consciousness of worth and virtue in the individual, and a lively desire to preserve the reputation of virtue. As a term it is variously used in military life,and frequently misunderstood by young and unexperienced officers in their first outset. As a quality of the mind, it cannot be too much encouraged or too much cultivated among military men of all ranks and descriptions. The possession of it is a guarantee for good conduct, a bond of fidelity, and a certain barrier against military corruption. Men are excited to deeds of valor and enterprize by a sense of honor, who would otherwise remain inactive, or only perform the mere drudgery of service. This species of honor, is in fact, the root of that *Esprit de corps* which makes the whole body of an army tenacious of reputation, and solicitous to preserve it unsullied from the colonel down to the lowest drum boy.

This term may likewise be considered as esteem, reputation, the glory which is attached by mankind to talents and the virtues.

Affair of **Honor**. We have already given a general outline of this term under **Duelling**. The propriety or impropriety, as well as the legality or illegality of which mode of terminating human differences is thus explained by the celebrated English lawyer John Selden. His words are under the head *Duel;* we shall quote them under that of *affair of honor*.

"A Duel may still be granted in some cases by the law of England, and only there. That the church allowed it anciently appears by this, in their public liturgies there were prayers appointed for the duellists to say, the judge used to bid them go to such a church and pray, &c. But whether this is lawful? If you make any war lawful, I make no doubt but to convince you of it. War is lawful, because God is the only judge between two, that is supreme. Now if a difference happen between two subjects, and it cannot be decided by human testimony, why may not they put it to God to judge between them, by the permission of the prince? Nay, what if we should bring it down for argument's sake, to the sword men; one gives me the lie: it is a great disgrace to take it; the law has made no provision to give remedy for the injury, (if you can suppose any thing an injury for which the law gives no remedy) why am not I in this case supreme, and may therefore right myself.

"A duke ought to fight with a gentleman; the reason is this: the gentleman will say to the duke, it is true you hold a higher place in the state than I; there is a great difference between you and me, but your dignity does not privilege you to do me an injury; as soon as ever you do me an injury, you make yourself my equal; and as you are my equal I challenge you; and in sense the duke is bound to answer him."

In addition to what Selden has said upon duelling, we shall quote a passage from Dr. Robertson's History of the reign of Charles the V. which will shew that this mode of determining private disputes is extremely ancient.

"It is evident" observes that author, "from Velleius Paterculus, lib. ii. c. 118, that all questions which were decided among the Romans by legal trial, were terminated among the Germans by arms. The same thing appears in the ancient laws and customs of the Swedes, quoted by Jo. O. Stiernhook de jure Sueonum et Gothorum vetusto, 4to Holmiæ 1682, lib. i. c. 7. It is probable, that when the various tribes which invaded the empire were converted to Christianity, their ancient custom of allowing judicial combats appeared so glaringly repugnant to the precepts of religion, that for some time, it was abolished, and by degrees, several circumstances which I have mentioned led them to resume it.

"It seems likewise to be probable from a law quoted by Stiernhook in the treatise which I have mentioned, that the judicial combat was originally permitted in order to determine points respecting the personal character or reputation of individuals, and was afterwards extended not only to criminal cases, but to questions concerning property. The words of the law are 'If any man shall say to another these reproachful words 'You are not a man equal to other men' or, 'You have not the heart of a man,' and the other shall reply 'I am a man as good as you,' let them meet on the highway. If he who first give offence appear, and the person offended absent himself, let the latter be deemed a worse man even than he was called; let him not be admitted to give evidence in judgment either on man or woman, and let him not have the privilege of making a testament. If he who gave the offence be absent, and only the person offended appear, let him call upon the other thrice with a loud voice, and make a mark upon the earth, and then let him who absented himself be deemed infamous, because he uttered words which he durst not support. If both shall appear properly armed, and the person offended shall fall in the combat, let a half compensation be paid for his death. But if the person who gave the offence shall fall, let it be imputed to his own rashness. The petulance of his tongue hath been fatal to him. Let him lie in the field, without any compensation being demanded for his death. Lex Uplandica ap. Stiern, p. 76. Martial people were extremely delicate with respect to every thing that affected their reputation as soldiers. By the laws of the Salians, if any man called another a *bare*, or accused him of having left his shield in the field of battle, he was ordained to pay a large fine. Leg. Sal. tit. xxxii, § 4: 6. By the law of the Lombards, if any one called another *arga*, i. e. a good-for-nothing fellow, he might immediately challenge him to combat. Leg. Longob. lib. i. tit. v. § i. By the law of the Salians, if one called another *cenitus*, a term of reproach equivalent to *arga*, he was bound to pay a very high fine, tit. xxxii. § i. Paulus Diaconus relates the violent impression which this reproachful expression made upon one of his countrymen, and the fatal effects with which it was attended. De Gestis Longobard. lib. vi. c. 24. Thus the ideas concerning the point of honor, which we are apt to consider as a modern refinement, as well as the practice of duelling, to which it gave rise, are derived from the notions of barbarians." See Robertson's History of Charles V. pages 271, 272.

We shall not take leave of our learned author without giving two or three instances out of his proofs and illustrations relative to the termination of private feuds by judicial or private combat.

This mode of trial was so acceptable, that ecclesiastics, notwithstanding the prohibitions of the church, were constrained not only to connive at the practice, but to authorize it. A remarkable instance of this is produced by Pasquier, Recherches, lib. iv. ch. i. p. 350. The abbot Wittikindus considered the determination of a point of law by combat as the best and most honorable mode of decision.

In the year 978, a judicial combat was fought in the presence of the emperor. The archbishop Aldebert advised him to terminate a contest which had arisen between two noblemen of his court, by this mode of decision. The vanquished combatant, though a person of high rank, was beheaded on the spot. Chronic. Ditmari. Episc. Mersb. chez Bouquet Recueil des Hist. tom. x. p. 121. Questions concerning the property of churches and monasteries were decided by combat. In the year 961, a controversy concerning the church of St. Medard, whether it belonged to the abbey of Beaulieu or not was terminated by judicial combat. Bouquet Recueil des Hist. tom. ix. p. 729. ibid. p. 612, &c. The emperor Henry I. declares that this law, authorizing the practice of judicial combats, was enacted with consent and the applause of many faithful bishops. Ibid. p. 231. So remarkable did the martial ideas of those ages prevail over the genius and maxims of the canon law, which in other instances was in the highest credit and authority with ecclesiastics. A judicial combat was appointed in Spain by Charles V. A. D. 1522. The combatants fought in the presence of the emperor, and the battle was conducted with all the rites prescribed by the ancient laws of chivalry. The whole transaction is described at great length by Pontus Heuterus Rer. Austrica. lib. viii. C. 17. p. 205.

The last instance which occurs in the history of France, of a judicial combat authorized by the magistrate, was the famous one between M. Jarnac and M. de la Chaistagnerie, A. D, 1547. A trial by combat was appointed in England, A. D. 1571, under the inspection of the judges in the court of Common Pleas; and though it was not carried to the same extremity with the former, queen Elizabeth having interposed her authority, and enjoined the parties to compound the matter, yet in order to preserve their honor, the lists were marked out, and all the forms, previous to the combat, were observed with much ceremony. Spelm. Gloss. Voc. *Campus*, p. 103. In the year 1631, a judicial combat was appointed between Donald lord Rea, and David Ramsay, Esq. by the authority of the lord high constable and earl marshal of England; but that quarrel likewise terminated without bloodshead, being accommodated by Charles I. Another instance occurs seven years later. Rushworth in Observation on the Statutes, &c. p. 266.

It manifestly appears from these extracts, that in former times not only the property of individuals was considered, but their feelings, as men of honor, were consulted. Law, however, soon obtained the entire ascendancy, and judicial or private combats were not only laid aside, but were moreover strictly forbidden. The military character alone seems to have retained a sort of tacit privilege to make appeals to the sword, in cases where the nice sensibility of the heart breaks through the trammels of legal disquisition, and establishes points of honor which can only be determined by personal exposure. Thus we find that although premeditated duels were severely punished in France, *Rencontres* or accidental quarrels were always overlooked, whatever their issue might be. Frederic the Great of Prussia seems to have set his face against duelling altogether. Yet it is singular, that notwithstanding his severe prohibition, a Prussian officer was under the necessity either of vindicating his wounded honor by an appeal to the sword or pistol, or was disgraced for having suffered a personal affront. In England the same hardship exists. Lord Kenyon declared from the bench, that he would personally interfere as expounder of the British laws, should any minister recommend mercy to his majesty on the conviction of an individual who had murdered his fellow creature in a duel See Duel.

Word of Honor, (*parole d'honneur*, Fr.) A promise or engagement that is made or entered into by word of mouth, the breach of which entails disgrace upon the violator.

Point of Honor, (*point d'honneur*, *Fr.*) A delicacy of feeling, which is generally acquired by education, and strengthened by an intercourse with men of strict integrity and good conduct. It is likewise very frequently the offspring of peculiar habits, received notions, and established etiquettes. The French familiarly say, *Ils se sont battus pour un point d'honneur*, they fought for a point of honor; they likewise say, *Il y va de son honneur*, his honor is at stake.

To die upon the bed of Honor, (*mourir au lit d'honneur*, Fr.) is a term particularly applied to military men, who die in battle fighting in their country's cause.

A court of Honor. Although a court of honor may be said, in some degree, to resemble a court of inquiry, nevertheless it cannot be strictly so; for a court of honor has not only the power of ascertaining the degree of guilt which may be attached to misconduct, but it can entail ignominy upon the guilty person; whereas a court of inquiry only investigates the matter and circumstances, and determines whether there be sufficient ground to try the accused before a general court martial; which is the last resort of military jurisdiction, and unites within itself all the qualities and powers of the other two courts.

A debt of Honor, an obligation which among honorable men, especially officers, is more binding than those engagements or contracts that are guaranteed by law. The reason is manifest.

Honors *by Guards, as a compliment to general officers, &c. with the detail of officers and men they are entitled to in the English army:*

The commander in chief, if a field-marshal or captain-general, has 1 captain, 1 lieutenant, 1 ensign, 2 serjeants, 2 drummers, 2 fifers, and 50 privates, with colors.

A general of horse and foot has 1 captain, 1 subaltern, 2 serjeants, 2 drummers, 2 fifers, and 50 privates.

A lieutenant-general of horse and foot has 1 lieutenant, 1 serjeant, 1 drummer, 1 fifer, and 30 privates.

A major-general of horse and foot has 1 ensign, 1 serjeant, 1 drummer, 1 fifer, and 20 privates.

A brigadier has 1 serjeant and 12 privates.

A quarter-master general has 1 serjeant and 12 privates.

Majors of brigade encamped together, have 1 serjeant and 2 privates.

A judge advocate has 1 serjeant and 7 privates.

A provost-marshal has 1 serjeant and 18 privates.

A provost-marshal, when he has prisoners, has 1 lieutenant, 2 serjeants, 1 drummer, 1 fifer, and 48 privates.

Military HONORS. A field-marshal in the British service is to be saluted with the colors and standards of all the forces, except the horse and foot guards, and excepting when any of the royal family shall be present; but in case a field-marshal is colonel of any regiment, or troop of horse or foot guards, he is to be saluted by the colors or standards of the regiment or troop he commands.

Generals of cavalry and infantry, upon all occasions, are to have the march beat to them, and to be saluted by all officers, those bearing the colors excepted.

Lieutenant-generals of cavalry and infantry are, upon all occasions, to be saluted by all officers. They are to have three ruffles given them, with presented arms.

Major-generals are to have two ruffles with presented arms.

Brigadier-generals are to have one ruffle with presented arms.

To colonels their own quarter-guards in camp turn out, and present their arms, once a day, after which they only turn out with ordered arms.

To majors their own guards turn out with ordered arms once a day; at other times they stand by their arms.

When a lieutenant-colonel or major commands a regiment, their own quarter-guards pay them the same compliment as is ordered for the colonel.

Honors to be paid by the cavalry.—A general of cavalry or infantry is to be received with swords drawn, kettle drums beating, trumpets sounding the march, and all the officers to salute, except the cornet bearing the standard.

A lieutenant-general is to be received with swords drawn, trumpets sounding twice the trumpet flourish, as in drawing swords, and all the officers to salute except the cornet bearing the standard; but the kettle drums are not to beat.

A major-general is to be received with swords drawn, one trumpet of each squadron sounding once the trumpet flourish, as in drawing swords; no officer to salute, nor kettle drum to beat.

A brigadier-general is to be received with swords drawn; no trumpet to sound, nor any officer to salute, nor kettle drum to beat.

All officers in the command of forts or garrisons, have a right to the complimentary honors from the troops under their command, which are due to the rank one degree higher than the one they actually possess.

Manner of paying honors.—In the British service the king's standard or color in the guards, is never carried by any guard except that which mounts on his majesty's person.

The first standard, guidon, or color of regiments, which is the union color, is not carried by any guard but that on the king, queen, prince of Wales, or commander in chief being of the royal family; and, except in those cases, it always remains with the regiment.

When general officers, or persons entitled to a salute, pass in the rear of a guard, the officer is only to make his men stand shouldered, and not to face his guard to the right about, or beat his drum.

All sentries are to pay a due respect to every officer who passes by their posts, but are to keep their proper front while paying the compliment.

All governors, whose commissions in the army are under the degree of general officers, shall have, in their own garrisons, all the guards turn out with rested arms, and beat one ruffle; and though the main guard turns out with rested arms every time he passes, yet they give him the compliment of the drum but once a day; but all the other guards beat as often as he appears near them.

If they are general officers likewise, they are then to have the further compliments paid them, by the several beatings of the drum, as practised in the army.

Regulation of honors to be paid to admirals.—Admirals, with their flags on the main-top, are to have the same respect from the troops as generals of cavalry and infantry; that is, upon all occasions to have a march beat to them, and to be saluted by all the officers, those bearing the colors excepted.

Vice admirals are to have the same respect as lieutenant generals of cavalry and infantry; that is, upon all occasions be saluted by all the officers in the garrison, the drummers beating 3 ruffles.

The rear admirals are to have the same respect as major generals, who have two ruffles, and not to be saluted by any officer.

Commodores with broad pendants have the same respect as brigadier-generals; which is, to have one ruffle.

Rank and precedence between sea and land officers.—The admiral or commander in chief of his majesty's fleet is to rank with a field-marshal of the army.

The admirals with their flags on the main-top mast-head, are to have rank with generals.

Vice admirals are to have rank as lieutenant-generals.

Rear admirals are to have rank as major-generals.

Commodores with broad pendants are to have rank as brigadier-generals.

Captains commanding post ships, after three years from the date of their first commission for a post ship, are to have rank as colonels.

All other captains commanding post ships, are to have rank as lieutenant-colonels.

Captains of his majesty's ships or vessels, not taking post, are to have rank as majors.

Lieutenants of his majesty's ships are to have rank as captains.

The rank and precedence of sea officers, in the classes above-mentioned, are to take place according to the seniority of their respective commissions.

Post captains commanding ships or vessels that do not give post, rank only as majors during their commanding such vessels.

No land officer is to command on board any of his majesty's squadrons or ships, nor any sea officer to command on land; nor shall either have a right to demand military honors due to their respective ranks, unless they are upon actual service.

All guards and centinels are to pay the same compliments to the officers of the navy, as are directed to be paid to the officers of the army, according to their relative ranks.

The compliments above directed are to be paid by the troops, to officers in the service of any power in alliance with the British king, according to their respective ranks.

Turning out of the line. The line turns out without arms, whenever the general commanding in chief comes along the front of the camp.

When the line turns out, the private men are to be drawn up in a line with the colors and standards; the corporals on the right and left of their respective companies, the picquet forms behind the colors, accoutred, but without arms.

The officers and non-commissioned officers are to be drawn up with their respective companies. The field officers in their proper posts in battalion, two ensigns taking hold of the colors.

When the commander in chief comes along the line, the camp colors on the flanks of the parade are to be struck, and planted opposite to the bells of arms, and the drums piled up behind the colors; the halberts are to be planted between, and on each side of the bells of arms, the hatchets turned from the colors.

Honors *of war*, in one sense are stipulated terms which are granted to a vanquished enemy, and by which he is permitted to march out of a town, from a camp or line of entrenchments, with all the insignia of military etiquette. In another sense they signify the compliments which are paid to great personages, military characters, &c. when they appear before any armed body of men; or such as are given to the remains of a deceased officer. The particular circumstances attending the latter are well known, and depend greatly upon the usages of different countries; those which regard our own service may be seen under *Burials.*

With respect to the former we think it necessary to observe, that it is extremely difficult, and much beyond the limits of this work, to describe them specifically; as much, indeed almost every thing, depends upon the disposition of the general who grants the capitulation. In some instances, the troops of a besieged garrison are permitted to march out with drums beating, colors flying, &c. others are only allowed to advance silently in front of their works, ground or pile their arms, face to the right and return within their line of entrenchments. Others again (as was the case with earl Cornwallis, at York Town, in Virginia) are permitted to march out, with drums beating, to a given spot, there pile their arms, face to the right about, and march back to their works. In the instance quoted, the officers retained their side arms and baggage, with such horses as they had lawfully obtained by purchase, &c. A sloop of war was allowed to proceed to New York with dispatches from the British general to sir Henry Clinton, who was commander in chief of the forces acting against America: which vessel passed and repassed without being searched. This indulgence proved extremely fortunate to a small number of American refugees, who were peaceably transported into the British lines, instead of being sacrificed to the just fury of their countrymen in arms.

When the town of Valenciennes surrendered to the coalition army, the garrison under the orders of general Ferrand was permitted to march out by the gate of Cambray with the honors of war. It was, however, specifically stated, that the troops should lay down their arms at a named spot, viz. at a house called *le Briquet*, where they were to leave their colors and field-pieces without damaging them in the least. They were likewise directed to leave their troop horses, artillery, provisions, and other military effects. Those belonging to the officers were restored to them, with their swords. It was further agreed, that the garrison should march out on the 1st of August, in the manner mentioned; and as the troops were prisoners of war, their route to return into France was to be communicated to them 24 hours previous to their departure, in order to receive their parole of honor. The officers and soldiers engaged not to serve during the whole course of the present war against the armies of his majesty the emperor, and of his allies, without having been exchanged conformably to the cartels, under pain of military punishment.

General Ferrand had demanded that the garrison should march out from the place on the 6th day after the signature of the capitulation, to repair to such part of the French republic as he should judge proper, with arms and baggage, horses, drums beating, matches lighted at both ends, colors flying, and with all the cannon they could carry away. These articles were refused by the duke of York; and on the 28th of July, 1793, Valenciennes surrendered to the British arms, in trust for the emperor of Germany.

As soon as the capitulation was signed, hostages were sent into the town, namely, a colonel, a major, and a captain, who were exchanged against officers of an equal rank of the garrison; which hostages were restored immediately after the execution of the articles of capitulation.

When Mantua surrendered to Bonaparte, the veteran general Wurmser, in consideration of his brave defence of the place, was allowed to leave the place with all the honors of war.

Several emigrants on this occasion, escaped in the covered waggons.

When Saragossa was taken by marshal Lannes in 1809, it was refused the honors of a capitulation, but ordered to surrender peremptorily at a given hour on several points, which was obeyed.

HONORABLE, noble, high spirited, full of rectitude, and beyond the least approach of meanness or corruption. This term is frequently attached to sur-names from false and vain courtesy.

HOOKS. Pieces of bent iron fixed to the transom plates of a field-carriage are so called. They serve to fix the bricoles or ropes for drawing it occasionally backwards or forwards.

Hooks *and* Eyes. It is directed in all well-disciplined corps, that every officer, non-commissioned officer, and soldier, when regimentally dressed, should have the uniform coat hooked across the chest. This regulation has, in some degree, been dispensed with during the winter months, as far as it regards the officers who have been permitted to button their coats. In some corps the indulgence is rendered nugatory, as the facings are sewed to the coat. The dressing of a line is certainly rendered more perfect by the use of the hooks and eyes, as they prevent any intermediate obstacle along the line of sight. This nicety is indispensible in parade business, and the propriety of some general rule being established is manifest, since every soldier knows, that the slightest deviation from the laudable system of uniformity almost always leads to gross neglect.

HOOKUM, an Indian word, signifying order or command.

HOOKUMNAUMEH, in India, signifies a letter of instructions, or the paper that contains orders.

HOOP *of iron*, a circular iron band. Several sorts of hoops are used in the construction of artillery carriages, as nave and axle tree hoops, &c.

HOPITAL, *Fr.* hospital. During the old French government, there existed 80 military hospitals under the immediate sanction of the king. These hospitals were subject to the war-minister, from whom they received instructions, and they were all originally built for the benefit of sick and disabled soldiers. The chief appointments in each hospital consisted of a comptroller of accounts, a physician, a surgeon major, and a contractor, whose sole duty was to provide for the wants and necessities of the invalid troops. These were permanent establishments. In time of war, every army had a certain number of hospitals attached to its component parts. There were likewise other hospitals, which were under the care of the intendant of each province. They chiefly consisted in those erected on the frontier and in garrison towns.

Hopital *sur mer*, Fr. hospital-ship. A particular vessel, which is always attached to a naval armament, and is provided with the necessary accommodations for the sick and wounded belonging to the ships of war. The same precautions (indeed greater if possible) are indispensibly necessary to prevent the dreadful consequences of contagion, that are directed to be observed in the fumigation, &c. of transports. During the old government of France, hospital-ships were of a particular construction Independently of the equipage, tackle, &c. belonging to every other navigable ship, these vessels were directed to have their decks extremely high, to have large port-holes, and to have the space between the decks constantly clear, so that the cots and bedding of the sick might be conveniently placed, and a constant circulation of free air be preserved.

HOPLITAI, foot soldiers among the Greeks, who bore heavy armor, and engaged with broad shields and long spears. These took precedence of all other foot soldiers.—Potter's Greek Ant. vol. ii. c. 3.

HOQUETON, *Fr.* a sort of garment, which was worn during the old government of France by gentlemen belonging to the king's body guard, who were called *gardes de la manche*. It sometimes signifies a serjeant; but the term is obsolete.

HORD, (*horde*, Fr.) a crowd or assemblage of people, who have not any fixed or certain habitation. The term was originally applied to a body of Tartars, who followed a roving life, encamped in different countries, and chiefly lived with their flocks.

HORION, *Fr.* a term which formerly signified a helmet, and which in the vulgar acceptation of it now, among the French, means a blow upon the head.

HORIZONTAL, parallel to the horizon; on a level.

Horizontal *superficies*, the plain field lying upon a level, without any rising or falling.

Horizontal *plane*, that which is parallel to the horizon of the place.

In levelling, the chief object to be considered is, whether two points be in the horizontal plane; or whether they deviate; and in what degree?

Horizontal *range*, or *level range of a piece of ordnance*, is the line it describes, when directed parallel to the horizon.

The following useful theorems come from the pen of the ingenious Dr. Halley:

1. A shot being made on an inclined plane, having the horizontal distance of the object it strikes with the elevation of the piece, and the angle at the gun between the object and the perpendicular, to find the greatest horizontal range of that piece loaded with the same charge of powder, that is, half the latus rectum of all the parabolas made with the same impetus.—Take half the angle contained between the object and the nadir, and the difference of the given angle of elevation from that half; subtract the versed sine of that difference from the versed sine of the angle made by the object and zenith. The difference of those versed sines will be to the sine of the angle last mentioned, as the horizontal distance of the object struck to the greatest range at 45 degrees.

2 Having the horizontal range of a gun, the horizontal distance and angle of inclination of an object to the perpendicular, to find the two elevations necessary to strike that object.—Take half the angle contained between the object and nadir; this half is equal to half the sum of the two angles of elevation sought. Then say, as the horizontal range is to the horizontal distance of the object, so is the sine of the angle of inclination to a fourth proportional; which fourth, being subtracted from the versed sine of the angle formed by the object and zenith, leaves the versed sine of half the difference of the angles of elevation, whose half sum was before obtained; therefore, by adding and subtracting half the difference of the angles of elevation to and from the said half sum the elevations themselves will be found.

HORN See Bugle *horn*.

Horn-work. See Fortification.

HORS *de Combat*, a French military phrase, signifying that an individual or body of men, are so completely beat by superior skill, &c. as not to be able to maintain the field of battle; thus a wounded man is *hors de combat*.

Mettre **Hors** *de Combat*, to drive your opponent before you; to press him so closely that he cannot make a stand against you—To put him out of the lists of contest.

Hors *de portée*, Fr. (in fencing,) out of distance.

Hors *de mesure*, Fr. (in fencing,) out of measure.

HORSE, in a military sense, a body of horse. See Cavalry.

Associated Horse—a body of cavalry so called in the days of Cromwell At the famous battle of Nasbie (fought on the 14th of June, 1645,) which decided the fate of Charles the First, the associated horse were posted in the rear of the right wing of the Republican army, and formed part of the reserve—There were troops of the association stationed in the rear of the left. Oliver Cromwell commanded the cavalry on the right of the whole, and the associated horse were under his immediate orders.

Horse *near-side protect*, a guard used in the cavalry sword exercise. See Sword *Exercise*.

Horse *off-side protect*. See Sword *Exercise*.

Horses—An allowance of 3 feet is generally made for the breadth of each horse standing at picket; and about 9 feet for the length of a horse.

A light dragoon horse, mounted and accoutred complete, carries about 2 cwt. 1 qr. and 14 lbs. without forage.

Horses in the service of artillery should not be made to draw above 3 cwt. each, besides the weight of the carriage.

Horses for this service should never be lower than 14 3-4 hands. The contractor is obliged to furnish them of this height for government.—A horse is generally supposed equal to five men.

Military horses *walk* about 400 yards in 4 1-2 minutes.

Trot the same distance in 2 minutes 3 seconds, and *gallop* it in about 1 minute.

With great burthens, less weight must be allowed for each horse to draw, than with medium burthens; as it cannot be supposed that, of a team of 8 horses, the leaders can draw so much as the horses nearer the carriage; and this disadvantage must increase as the team lengthens. A team of

4 horses may draw 6 cwt. each. Tot. 24 cwt.
6 Do. ———— 5 do. do. —— 30 do.
8 Do. ———— 4½ do do. —— 36 do.
12 Do. ———— 4 do. do. —— 48 do.

including the carriages. See also the word *Load*.

It is usual in heavy carriages to reckon all their weight exceeding 12 cwt. as part of the load.

Horses allowed for drawing Field Artillery Carriages.

All the horse artillery carriages are drawn by 4 horses each, except 12 prs. which have 6 each. *Park Carriages.*—12 pr. medium, and 6 pr. heavy, 6 horses each—6 pr. light, and 5 1-2 howitzer, upon the new construction, are allowed each 4 horses, but upon the old only 3 each.

Ammunition waggon, com. pat. 3 horses.
Do. — Flanders pat. 4 do.
Forge cart, 2 horses —Am. cart, 2 do.

Horses *falsely mustered* are by the 27th section of the British mutiny act to be forfeited, if belonging to the person who lent them for that purpose, if not, the person lending them to forfeit 20*l*. When officers belonging to the cavalry regiments purchase horses for public service, they are to make the best bargain they can for government, and to account for every saving which has been made, within a limited sum.

Horse, a wooden machine, which soldiers ride by way of punishment. See Cheval de Bois.

Horse. See Portcullis.

HORSEMAN. See Cavalry.

HORSE SHOE. See Fortification.

HOSE, breeches or stockings. It is generally taken in the latter sense when mentioned as part of a soldier's necessaries.

Over-**Hose**, mens breeches and stockings together, or leggings. Dragoons generally wear them when they appear in their watering dresses.

HOSPITAL, a place appointed for the sick and wounded men, provided with physicians, surgeons, nurses, servants, medicines, beds, &c.

HOSPITALS *with military superintendants*.—There are four British general hospitals of this description, viz. at Plymouth, Deal, Gosport, and Portsmouth, and Chelsea.

The surgeons at Portsmouth and Deal have not any rank attached to the situation, but they receive five shillings per day extra allowance in addition to their nett pay of ten shillings. At Plymouth a physician has charge of the hospital; he receives twenty shillings per day, but has no extra allowance. York hospital at Chelsea is attended by an assistant surgeon, being under the immediate direction of the surgeon general.

The military superintendants have five shillings over and above their nett pay, according to the rank they hold in the army.

At Gosport the military superintendant has one guinea allowed per week for lodging money, together with coals, candles, &c.

A fifth military superintendant was appointed in 1803 to take charge of the temporary hospital at Colchester.

The cause of humanity has lately been espoused by the belligerent powers of Europe in a manner which reflects credit on the enlightened age we live in. The following two articles which have been agreed upon between the Austrians and the French are illustrative of our observations.

Hospitals ought to be considered as inviolable.

Art. 1. The military hospitals shall be considered as so many inviolable asyla, where valor shall be respected, shall be assisted, and shall be free, whatever the army may be to which these hospitals belong, and upon whatever ground they may be established.

Art. 2. These hospitals shall be marked out by writings placed on the adjacent roads, in order that the troops may not approach, and that in passing they may observe silence and cease beating the drums, or sounding the trumpets.

Camp-**Hospitals** are either general or regimental. The general hospitals are of two kinds, viz.

Flying-**Hospital**, *Stationary* **Hospital**. The first attends the camp at some convenient distance, and the latter is fixed at one place. In the choice of both Dr. Pringle thinks it better to have them in towns than villages, as the former will afford larger wards, besides more of other conveniencies. These wards should be as airy as possible.

Regimental-**Hospitals**, are frequently in barns, stables, granaries, and other outhouses; but above all, churches make the best hospitals from the beginning of June to October; these hospitals are solely for the use of the regiments they belong to.

Every regiment on the British establishment has an hospital for the reception of the sick belonging to it. This hospital is under the immediate care of the regimental surgeon, who is subordinate to the general medical board.

Officers commanding brigades are enjoined frequently to visit the hospitals of the regiments composing their brigades, and minutely to investigate the economy and order therein established; to enquire into the state of the patients, their diet, and attendance of every kind, and to enforce the strictest observance of the hospital regulations.

These attentions are required still more in detail, from commanding officers of regiments, who from personal observation have opportunities of checking every abuse, and whose duty it is to extend to the hospitals the same system of order, regularity, and discipline, which should prevail in their regiments.

The captain and subaltern of the day of each regiment are to visit the hospital at different and uncertain hours, to observe the cleanliness of the wards, the regularity of messing and the appearance of the men, who while they are in the hospital, are by no means to be permitted to contract habits of slovenliness in their dress, but are expected to appear perfectly clean in every particular.

Every species of gaming is strictly forbidden. Any patient convicted of swearing, disorderly behaviour, insolent and provoking conduct towards the attendants, or of any deviation from the hospital regulations, will be severely punished.

The captain of the day is to report any irregularities, he may observe, to the commanding officer of the regiment.

The surgeon is to make a daily report of the sick to the commanding officer, who will make a weekly report to the officer commanding the brigade, who will make a general report of the sick of his brigade once a week to head quarters.

Regimental hospitals are under the immediate direction of their respective surgeons, subject to the general instructions and superintendance of the inspector of regimental hospitals, or other professional persons, having authority for that purpose, from the war department, or the commander in chief. It is the duty of the inspector of regimental hospitals, and of such other officers of the medical staff as shall be ordered for that purpose to visit regimental hospitals from time to time; to observe whether the hospital regulations are strictly adhered to, to enquire whether any causes of complaint exist among the patients, and to submit to the generals commanding in districts, such local observations as he conceives may tend to the benefit of the sick.

When a regiment is stationed in a barrack, where no detached building is appropriated for the hospital, or in camp and cantonments, it is the business of the surgeon to procure an airy, and commodious hospital, taking particular care, that it is amply supplied with wholesome water.

In camp, a tent will be allowed, which must be pitched upon the best dry piece of ground in the vicinity of the regimental hospital, to which it is granted as an aid, but must not, except in cases of absolute necessity, be itself considered as the hospital.

The responsibility for the order, regularity, and cleanliness of the regimental hospital, for the diet and care of the patients, and for the general conduct and economy of the whole establishment, rests entirely with the surgeon; but commanding officers are enjoined to furnish such military assistance, as may be necessary for the attainment of those objects, and all non-commissioned officers and others placed in the hospital, in aid of the surgeon, are commanded to yield the most implicit obedience to the instructions they may receive from him, and to enforce in every instance, the most minute observance of the hospital regulations, which are to be fairly written, and fixt on a board in the most conspicuous part of the entrance of the regimental hospital.

The surgeon should be consulted in the selection of the serjeant to be appointed to assist him in the hospital; and it will tend materially to the benefit of the sick, that this non-commissioned officer, and the orderly men acting in the hospital, should be considered as being in a permanent situation, and not liable to be removed except in case of misdemeanor,

A guard is to be constantly furnished to the hospital, and the surgeon must signify to the commanding officer of the regiment, the particular orders which he wishes to be given to the non-commissioned officer commanding it, and to the sentries.

When a soldier comes into the hospital, his arms and accoutrements are to be taken in charge by the non-commissioned officer attending the hospital, but his ammunition is to be left with his troop or company, and is in no instance to be taken with him to the hospital.

Regimental surgeons are enjoined to take under their care any non-commissioned officers and soldiers of other regiments, (upon the commanding officer's authority for so doing being obtained) who from the absence of the corps to which they belong, from there being no general hospital in the neighborhood, or from other unavoidable circumstances, are under the necessity of applying to them for relief and assistance.

It cannot be superfluous to remark in this place, that in the French service there was, and we believe there still is, a specific regulation, which directs, that all soldiers who have contracted a venereal disorder should be received into one of the public hospitals, without exception or distinction. They are attended to in a particular quarter or ward without expence to themselves or to their corps. Particular care is taken not to mix their linen or clothes with others, and they are always washed apart. No soldier, whose disorder has been pronounced incurable was or is received into any of the public hospitals. The physician or surgeon only gives the incurables a certificate of their state and condition.

It is very desirable that in every regimental hospital, there should be an apartment appropriated to convalescents, whose diet and mode of living must remain under the direction of the surgeon, and who must themselves be in every respect, subject to the hospital regulations. A trusty non-commissioned officer must be appointed to the superintendance of the messing, and conduct of this particular ward.

Convalescents, on coming out of the hospital are not to be put on duty, till the surgeon certifies to the adjutant, that they are perfectly recovered; for which purpose the surgeon, or assistant surgeon, must make a particular inspection of these men, at morning parade, to prevent any remaining longer exempted from duty, than the state of their health renders absolutely necessary. On a march, when circumstances will permit, the packs of such convalescents, as have not yet received certificates of their being fit for duty, should be carried for them.

Convalescents, when discharged from the hospitals should not be put immediately on public duties, but should be employed for a certain time, on regimental guards only, where they are not liable to be so much exposed to the weather, or to fatigue.

It is most positively ordered that the surgeon or assistant surgeon shall attend all parades and field days. No punishment is to be inflicted, but in the presence of the surgeon or assistant surgeon.

In cantonments and barracks the quarters of the surgeon must be near the hospital; and the assistant surgeon's tent must be pitched in its vicinity when a regiment is in camp.

The instructions for the economy and management of regimental hospitals, are framed by the war office.

Chelsea Hospital. See Chelsea.

Greenwich Hospital. A magnificent building originally instituted by king Charles II. for decayed seamen and mariners. It stands upon the banks of the river Thames, has a delightful park annexed to it, with an astronomical observatory. It is situated five miles east of London, in the county of Kent.

Hospital-*mate*, in recruiting districts. An hospital mate should be placed under the orders of each field officer, to examine the recruits when brought for inspection, and to give such medical assistance as may be in his power, to the several recruiting parties in the district he belongs to. The actual disbursements of the said mate for medicines, when not supplied from the public stores, will be reimbursed to him by the district military agent upon a certified account thereof, vouched by the approving signature of the inspector of the district.

Hospital-*fever*, a name given to the malignant catarrhal fever, as being the most frequent in hospitals.

HOSPODAR, a dignitary title which is given to the prince of Walachia, who is tributary to the Grand Seignor, and from whom he receives the investure.

HOST, an army; any large body of men assembled together in arms.

HOSTAGE, in the art of war, a person given up to an enemy, as a security for the performance of the articles of a treaty. When two enemies enter into a treaty or capitulation, it is common for them mutually to give hostages as a securiry for their reciprocally performing the engagement they have entered into. An hostage becomes either an accessary, or principal according to the state of things. Thus, for example, he is accessary when a prince promises fidelity to another prince, and gives either his son or some great lord, as a security for his performance, without any further capitulation; for then these hostages are only an additional engagement of the prince; and if he violates his word, they are not in any manner responsible. An hostage becomes a principal when it is stipulated that he shall be answerable for the event of things. For instance, if a city promise to surrender within a certain time, in case it is not succoured, and, for the security of this article, give hostages (which are in the same nature as bail given to a creditor to secure a debt); so that if the succour arrives in time, the promise becomes void, and the hostages are discharged; but if the succours do not arrive, and the city is guilty of a breach of faith by refusing to surrender, then the hostages become principal, and may be punished for a breach of faith.

HOSTILE, inimical; suitable to an enemy.

HOSTILITES, *Fr.* See Hostilities.

HOSTILITIES, in a military sense, may imply a rupture between the inhabitants of the same country, town, or place, and the first outrage that is committed by either party, as in general matters of warfare, is considered to be the first commencement of hostilities. Between nations, the first act of hostility is taken as a declaration of war. There are, however, certain established laws and regulations by which acts of hostility formerly were governed; without the intervention of these restrictions, war is conducted upon the most brutal and ferocious principles. Every wise and good general will exert his influence and authority to soften the fury of his victorious men, let the contest be ever so obstinate and bloody. Self-preservation, indeed, suggests this natural precaution; for if soldiers were permitted to ill-treat their prisoners, the sanguinary system of retaliation must prevail.

HOSTILITY, denotes a state of war or enmity between two nations. During a truce all acts of hostility are to cease on both sides.

HOSTING. An obsolete term, formerly signifying the mustering of men in arms.

HOTEL *des invalides*, Fr. a spacious building which was erected by Louis XIV. in Paris, at the extremity of the Fauxbourgh, St. Germain, upon the river Seine, as a public monument of his charity and magnificence. All disabled, infirm, and wounded officers and soldiers were received, lodged, and subsisted, during the remainder of their lives within its walls. The established number upon the foundation was 4000, including officers and soldiers. All exceeding that number, and who were less incapable of bearing arms, were distributed among the different garrison towns upon the frontiers of the kingdom, in detached and separate companies.

During the old government of France, a particular staff was appointed to superintend the duty at the *Invalides*, and a guard was regularly mounted every morning. Officers and soldiers, entitled to this charity, were first received in 1670. M. de Louvois, minister and secretary at war, was the first director and administrator general, and M. Dormoy was the first governor or commandant.

The staff consisted of one director and administrator general, one governor commandant, one *lieutenant du Roi*, one major, two adjutants, one *garcon major*, one director and superintendant of the hospital, and one inspector and comptroller general, who did the duty of commissary at the different inspections.

No person could be admitted into the royal hospital of invalids unless he had served twenty years successively and without interruption, or had been dangerously wounded in the service of his country. The necessary certificates were signed by the commanding officers and majors of regiments, which were afterwards examined by the directors or inspectors.

No officer was received with the rank of officer, unless he had served two years in that capacity, and had been dangerously wounded, or was otherwise rendered incapable of doing duty.

The persons belonging to the *Hotel des-Invalides* were divided into three classes:

The first class was composed of officers belonging to the king's troops, to the body-guards, gens d'armes, light-horsemen, musqueteers, serjeants of companies in the horse grenadiers, after having served five years in that capacity; of serjeants of the French and Swiss guards, after ten years service in that capacity; of officers attached to the constable's jurisdiction, exempts and maréchaussés, after having been ten years with the rank of officers; and of gens d'armes and light horsemen belonging to established companies; of quarter-masters from cavalry and dragoon corps, and of infantry serjeants, who bore the brevet rank of lieutenant, after having served five years in the last capacity.

The second class was composed of gens d'armes, light horsemen belonging to established companies, quarter-masters belonging to cavalry and dragoon corps, and of serjeants from the infantry, after having served ten years in that capicity; of those likewise who, having left the cavalry to enter into the body-guards, had again returned to the cavalry. Within this class were also comprehended the *gardes magasins*, the captains and conductors of artillery, after thirty years service, ten of which were to be in the last mentioned capacities. All belonging to this class wore an uniform distinguished from the dress of the soldier, and were permitted to wear a sword. They received at the commencement of every month 15 sols, or 7 1-2d. English, for ordinary expences; they were lodged in a particular quarter of the building, which was allotted to their use; they had a separate room to mess in; and they were fed like the common soldier, with this only exception, that each of them was allowed every morning a *demi-septier*, or an English pint, of wine. Those belonging to established garrisons in forts or citadels composed companies which were called *compagnies de bas-officers*, companies of non-commissioned officers.

The third class was composed of private soldiers, heavy horsemen, and dragoons archers attached to the constable's jurisdiction and marèchaussées, or paroles belonging to the police, masters or common workmen and artillery drivers.

HOTTE, *Fr.* a sort of hand-basket, which is often made use of in the construction of batteries and other works, and serves to carry earth from one part to another. Hence the word *hod* a well known machine for carrying bricks.

HOTTENTOTS, the Aborigines, or native inhabitants of our present settlement at the Cape of Good Hope.

HOULLIER, *Fr* an obsolete French term, which meant what is now expressed by *Picoreur des armées*, or a freebooter.

HOUN, a gold coin of the Mysore country, value about four rupees, or two dollars.

HOURDEYS, *Fr.* an old French term which signified, first, hurdles with which the tops of the walls belonging to a fortified town were covered, in order to shield them against the concussion of warlike machines; and secondly, a machine formerly used, which was called in Latin *bordacium*.

HOUSEHOLD *troops.* The Life-Guards, Royal Regiment of Horse-Guards, and the three regiments of Foot-Guards are so stiled. It is a ridiculous privilege of these regiments, in the British service, that no officer of the line, fencibles or militia, can sit upon a court martial which may be assembled for the trial of any person belonging to them.

HOUSING, or *saddle*-**HOUSING**, cloth, skin, or other ornaments added to saddles, by way of distinction; frequently embroidered with gold or silver, or edged with gold or silver lace.

HOUSS. See HOUSING.

HOWITZ, a kind of mortar, mounted upon a field-carriage like a gun: the difference between a mortar and a howitz is, that the trunnions of the first are at the end, and of the other in the middle. The invention of howitzes is of much later date than mortars, as from them they had their origin.

The constructions of howitzes are as various and uncertain as those of mortars, excepting the chambers, which are all cylindric. They are distinguished by the diameter of the bore; for instance, a 10 inch howitz is that, the diameter of which is 10 inches; and so of the larger or smaller ones.

HOWITZ *battery* is made the same as a gun battery, only the embrasures are made at least a foot wider, on account of the shortness of the howitz. See BATTERY.

Field HOWITZER. The modern French use 6-inch howitzers in the field, which can throw a grenade at 6 degrees elevation, to a distance of 600 toises. The 6-inch howitzer can likewise throw to a smaller distance, a cartridge with 61 balls, of seventeen lines diameter. In both instances the effects are extremely fatal. The cavalry, in particular, can be annoyed by the former, in so galling a manner, as to be rendered almost useless.

These howitz are used very numerously by the light or horse artillery; for which their form and weight admirably fit them.

Howitzers.—*Dimensions and weight of brass Howitzers.*

Kind.		Length.		Weight.			Length of bore.	Chamber.				
								Length.	Diameter.		Powder contained in	
									at top.	bottom.		
Inch.	diam.	Ft.	Inch.	cwt.	qrs.	lbs.	Inches.	Inches.	Inches.	Inches.	lbs.	oz.
10		3	11½	25	3	14	29.9	12.6	5.776	4.12	7	0
8		3	1	12	3	12	24.7	8.61	4.6	3.40	3	8
5½	Heavy			10	0	0					3	0
5½	Light	2	2¾	4	0	2	18.47	6.02	3.2	2.45	1	0
4 2-5		1	10	3	0	13	15.21	4.52	2.73	2.24	0	8

French Howitzers, in their own old weights and measures.

		Ft. In.		lbs.		lbs. oz.	
8 inches	diameter.	2 3	length.	1110	weight.	1 12	charge.
6 inches				670		1 12	full.

Table containing the kinds of Howitzers used by different powers in Europe.

Nations.	Kinds.	Shells
		Wt.
Prussian	25 Pr.*	62 lbs.
	10 —	27
	7 —	14
Danish	18 —	36
	10 —	20
Saxon	16 —	32
	8 —	16
Hanover	30 —	61
	16 —	33
English	4 2-5 inch or 4 Pr.	8 lb.
	5 1-2 inch or 8 Pr.	16
	8 inch or 23 Pr.	46
French	6 inch or 12 Pr.	23
	8 inch or 22 Pr.	43

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* See the word Shell for the principle on which the Germans class them in pounders.

Ranges with a light 5 1-2 inch Howitzer. 1798.

Elevation.	4 Ounces.			8 Ounces.			12 Ounces.			1 Pound.		
	Flight.	Range to first graze.	Extreme range.	Flight.	Range to first graze.	Extreme range.	Flight.	Range to first graze.	Extreme rang e.	Flight.	Range to first graze.	Extreme range.
Deg.	Sec.	Yards.		Sec.	Yards.		Sec.	Yards.		Sec.	Yards.	
P B				1	96	From 700 to 1000 yards.	1½	140	From 1000 to 1350 yards.	1½	159	From 1100 to 1400 yards.
1	1	66	From 400 to 600 yards.	1½	143		2	334		1	325	
2	1	85		1-	184		2	351		2	490	
3	1½	100		2	258		2-	506		3	668	
4	1-	110		2-	307		3	500		4	728	
5	2	115		2-	376		3	509		5-	918	
6	2	168		3	408		3-	581		5	823	
7	2	194		3-	529		5	872		6	975	
8	2-	226		4-	630		6-	975		7	1044	
9	2-	282		5	645		7	911		8	1049	
10	2-	279		5	642		7	1021		8	1104	
11	2-	260		5-	797		7-	1177		8	1173	
12	3	315		5-	715							

Ranges with a heavy 5 1-2 inch Howitzer. 1793.

Elevation	2 Pounds.			3 Pounds.		
	Flight.	First Graze	Extreme range.	Flight.	First Graze	Extreme range.
Deg	Sec.	Y'ds	Yards.	Sec.	Y'ds.	Yards.
1	2	453	From 1400 to 1900	3	479	From 1400 to 2000
2	4	595		5	722	
3	4	666		5	921	
4	5	847		5	1000	
5	5	957		7	1325	
6	7	1173		8	1530	
7	9	1449		9	1577	
8	8	1355		9	1721	
9	8	1585		9	1801	
10	10	1853		9	1791	
11	9	1793		12	1013	
12	10	1686				

HUE AND CRY, an English official Gazette so called, which is published at the expiration of every third week in the year, and serves to advertise deserters. That part which immediately relates to desertions is divided into seventeen columns, viz. names, corps, age, size, coat, waistcoat, breeches, hair, complexion, eyes, marks, and remarks, trade, &c. parish born, county born, time, from whence, agent's names, agent's abode.

HUGHLY WACCA, *Ind.* a newspaper or chronicle which is kept by the officers of the native governments in India.

HUISSIER *d'armes*, Fr. tipstaff; an officer formerly so called in France, who was attached to the royal household. They were at first distinguished by the name of *Sergens d'armes*, or serjeants at arms. Some were directed to bear the mace before the king during the day, and obtained on that account the appellation of *Huissiers d'armes;* in later times while the monarchy subsisted, they were called the *Huissiers*, or tipstaffs of the king's chamber. Others kept watch in the king's bed-chamber during the night, and were sworn to expose their lives for the safety of his person, whence they obtained the name of *archers de la garde*, which term was changed into *gardes-du-corps*, or body-guards.

Death **HUNTERS**, followers of an army, who, after the engagement look for dead bodies, in order to strip them. They generally consist of soldiers wives, &c.

HUNGARIAN *battalion*, a body of men belonging to the Austrian army, whose dress consists in a white jacket, the buttons straight down to the waist, with blue colored collar, cuffs and skirts before and behind, like the rest of the Austrian infantry, with this difference, that the latter have white breeches and long black gaiters, and the former wear light blue pantaloons and half-boots.

HUNS, GOTHS, and VANDALS, barbarous tribes that inhabited the various provinces of Germany which had never been subdued by the Romans, or were scattered over those vast countries in the north of Europe, and north west of Asia which are now occupied by the Danes, the Swedes, the Poles, the subjects of the Russian empire, and the Tartars.

HURDLES, in *fortification*, are made of twigs of willows or osiers, interwoven close together, sustained by long stakes. They are made in the figure of a long square; the length being 5 or 6 feet, and breadth 3 or 3 1-2. The closer they are wattled together, the better. They serve to render batteries firm, or to consolidate the passage over muddy ditches; or to cover traverses and lodgments for the defence of the workmen against the fireworks, or the stones, that may be thrown against them.

Hurdle *Battery*. See Battery. These are the invention of colonel Congreve of the British Artillery, and are admirably adapted for temporary fortifications. They consist of hurdles fixed in the ground in a triangular form, the intermediate space being filled with sand or earth, &c. are constructed in a few minutes, and in any figure.

HURTER, a flatted iron fixed against the body of an axle-tree, with straps to take off the friction of the naves of wheels against the body.

HURTOIR, a piece of timber about 6 inches square, placed before the wheels of a carriage, against the parapet of a battery, to prevent the wheels from doing damage to the parapet.

HURTLE. See Skirmish.

HUSB *ul hookum, or* **HASSAB** *ul hookum*, Ind. a patent or order, under the seal of the Vizier, with these initial words, which signify, *always to command.*

HUSSARDS, *Fr.* hussars. They were first introduced into the French service in 1692, and owed their origin to the Hungarian cavalry which was subsidized by France before the reign of Louis XIII.

Hussars, are the national cavalry of Hungary and Croatia, they never encamp, consequently are not burthened with any kind of camp equipage, saving a kettle and a hatchet to every six men. They always lie in the woods, out-houses, or villages, in the front of the army. The emperor of Austria and the king of Prussia, had many troops under this name in their service. See Cavalry.

Death's-Head Hussars, a regiment of Hussars in the Prussian service, so called from the emblems of death being exhibited on their caps. They were dressed in black, faced with yellow, and rode small active horses.

In the seven years war they obtained considerable reputation under the command of the brave and intrepid general Ziethen.

HUT. The ancient mode of encamping was in little huts. In the American war, hutted camps were not uncommon. The French armies have encamped in huts from 1793, as in that years campaign they lost all their tents.

Hutte, *Fr.* Hut.

HUZZOOR NAVEIS, *Ind.* a secretary who resides at an Indian court, and keeps copies of all firmauns, records, or letters. *Huzzoor*, is the court, *Naveis*, a writer.

HYDER, the Arabic term for lion. This title is often given to men of rank in India.

Hyder Ali, the sultan of Mysore, was known under the name of Hyder Naik; his son Tippoo succeeded him, and was killed at the storming of Seringapatam by the British forces.

Hyder Cooly, a term of subjection used in India, meaning literally the slave; but not so understood; it is a proud assertion of humility, such as the pope used, in calling himself the fisherman.

HYDERABAD, HYDRABAD, a city in Asia, which arose from the desertion of Golconda. This name is often used in Indostan when Hyderabad is meant. Hyderabad became the principal rendezvous of the Mahomedans opposed to the Marattahs whose country lies between Guzzerat and Golconda. See Marattahs.

HYDRAULIC, (*Hydraulique*, Fr.) the name of a particular science, which points out the method of conducting and raising bodies of water.

Colonnes Hydrauliques, *Fr.* columns ornamented by sheets of water or water spouts.

HYDROMETER (*Hydrometre*, Fr.) the name of an instrument which serves to ascertain the dryness or moisture of the atmosphere.

HYDROSTATIC, (*Hydrostatique*, Fr.) the name of a science whose principal object is to ascertain the weight of fluids, particularly of water, and of all bodies that are either borne upon the surface or immersed beneath it.

HYPERBOLA, the section of a cone made by a plane, so that the axis of the section shall incline to the opposite leg of the cone.

HYPOTHENUSE, that line which subtends the right angle of a right angled triangle.

J.

JACK. See Gin.

Jack-*boots*. Boots formerly worn by cavalry, made of thick firm leather, hardened in a peculiar manner, that is by a mixture of rosin, pitch, and oil, applied before a fire until they become stiff and impervious to water. They were sometimes lined with plates of iron. The best infantry caps are jacked leather.

Jack *wambasium*, a sort of coat armor, formerly worn by horsemen, not of solid iron but of many plates fastened together, which some persons by tenure were bound to find upon any invasion.

JACKET, a short coat. See Clothing.

JACOB's *staff*, a mathematical instrument for taking heights and distances, called also a *cross staff*.

JACQUE, *ou* JAQUE, *Fr.* a sort of close jacket, which was formerly worn by the *francs-archers*, or free archers, and reached down to the knee. These jackets were stuffed underneath the linen or cloth with which they were made. They sometimes consisted of leather, lined with 20 or 30 pieces of old cloth, rather loosely put together. The ancient horsemen wore these jackets under their coats of mail, and they were called *gobison*.

JADE, *Fr.* a very hard stone, of an olive color, with which the handles of swords and sabres are made in Poland and Turkey. This stone is said to possess wonderful virtues for the removal of the gravel or nephritic cholic; in these cases it is simply applied to the loins.

JAFFURNAPATAM. The town of Ceylon is so called by the Indians. The port of Jaffur.

JAGURNHAUT, *Ind.* a Hindoo pagoda, on the Balasore coast, bay of Bengal.

JAGHIRDAR, the person in possession of a jaghire.

JAGHIRE, an Indian term, signifying the assignment of the revenues of a district to a servant or dependant of government, who is hence called a *jaghirdar*. Jaghires are either *musbroot*, which means conditional, or *belasburt*, which signifies unconditional. Jaghires are frequently given in India to persons as a reward and compensation for their military services. The British obtained footing in Bengal first as traders by courtesy; they then got a *Jaghire musbroot*.

Jaghire Asham, *Ind.* land granted for the support of the troops.

Jaghire Zat, *Ind.* lands granted for private maintenance.

JAM, *Fr.* which is sometimes written *jamb*, is a thick bed of stone, by which the operations of the miners are suddenly interrupted when they are pursuing the veins of ore.

JAMBEUX. An obsolete word, which formerly signified boots, covers, or armor for the legs.

JAMBS, sometimes written *jaumbs*, Fr. The side posts of a door.

JALET, *Fr.* a name given to certain round stones which are cast out of a bow called *arbalête à jalet*, or cross-bow. These stones are more generally called *galet*.

JALONS, *Fr.* long poles with a wisp of straw at the top. They are fixed at different places and in different roads, to serve as signals of observation to advancing columns, when the country is inclosed, &c. They are likewise used as camp-colors to mark out the ground on days of exercise.

JALONNEMENT *d'une colonné*, Fr. Is the designation of certain points by which a column is governed on its march.

JALONNEURS, *Fr.* are the men selected from a battalion to mark out the ground, or, to take up relative points towards which the columns may march. We call them *guides* of *manœuvre*.

St. JAMES, *Knights of*, a military order in Spain, first instituted in the year 1170, by Ferdinand II. king of Leon and Galicia. The greatest dignity belonging to this order was that of grand master, which had been united to the crown of Spain. The knights were obliged to make proof of their descent from families that had been noble for four generations on both sides; they must also make it appear that their said ancestors had neither been *Jews*, *Saracens*, nor *heretics*, nor have ever been called in question by the Inquisition! The novices were obliged to serve six months in the gallies, and to live a month in a monastery. They observed the rules of St. Austin, making no vows but of poverty, obedience, and conjugal fidelity.

JANIBAR, *Ind.* an advocate; a de-fender; it likewise signifies a partial person.

JANISSAIRES, *Fr.* See JANIZARIES.

JANIZARIES. The first establishment of this body of armed men took place when the sultan Amurat obtained such wonderful success in the inroads that were made into Thrace, and a part of Macedonia, by the Bachas Lala, Saim, and Auranos. Nor was the sultan satisfied with this good fortune; he pushed his successes into Europe, and took an immense number of prisoners of all ages, but principally children. These were put under military tuition, with the view of hereafter converting them to some useful purpose for the Ottoman state.

Amurat took advice of one Agis Bictas, who by the dint of hypocrisy had obtained the character and reputation of a very virtuous man. Agis Bictas gave directions in the first instance, that these children should put several christians to death. He did this with the view of accustoming their young minds to scenes of slaughter, and to inure them to cruelty, as they were hereafter to compose the groundwork of the Turkish infantry, under the appellation of *janizaries*, or *new militia.* He next instructed them to observe an austere and barbarous outside appearance, and to become emulous of acquiring peculiar fame whenever they should be engaged in battle. In order to impress them with ideas of grandeur, he took off a part of his muslin sleeve, and twisted it in the shape of a turban, put it round the head of one of the children, when the corps were first established. This turban or cap was the model which the rest were to imitate. The Janizaries wear the same sort to this day, with the addition of some gold lace.

The body of janizaries has been considerably augmented since their first establishment. According to a late account they have been increased to 54,222; these have been divided into three separate corps, viz. into *jajabeys*, *bolykys*, and *selmanys*. These were moreover distinguished among themselves by the following names; *corigys*, *oturakys*, and *fedlakwans*.

They are under chiefs appointed for the specific purpose of superintending their conduct and behaviour, and are subordinate to particular officers, whose charge is confined to corps or companies that are called *odas*, a Turkish word, which properly signifies chamber or room, being thus called from the place in which they were ordered to mess. At Constantinople these chambers are covered with a sort of china ware; and there are recesses, called sophas, on which the men may sit or sleep. A kitchen is attached to each room, with every other convenience. When they take the field the same arrangement is attended to. The different companies being distributed in large round tents that are distinguished by the figures of beasts and Arabic words.

All the janizary companies consist of 196 men each. There are 101 companies of *jajabeys*, who form the garrisons of the most important places upon the frontiers. The officers belonging to these companies are permitted to ride in the presence of their general, which is a privilege peculiar to themselves. On this account they wear yellow half boots.

The *bolykys* consist of 61 companies; the commanding officers are obliged to wear red half boots, which is to shew, that they are not permitted to go through their duty on horseback.

The *selmanys* amount to 34 companies. The officers belonging to them are subject to the same regulations by which the *bolykys* are governed. They must march by their general in red half boots on foot, with this exception, that 30 supernumerary young men, who are *seconded*, and in expectation of commissions through the influence of their parents, are allowed to ride until they get companies

A select body of men is indiscriminately chosen out of these three sorts of janizaries; this chosen body is called *corigys*, and amounts to 930 men. Their particular duty is to protect the three imperial mansions of Constantinople, Adrianople, and Bursa.

Every janizary is obliged to give one and a half per cent. of all the money he receives in time of peace to the treasurer of his room, or to the treasurer general of the corps, and seven per cent. in time of war. In consideration of this sum he is allowed a space of ground, six feet in length and three in breadth to spread his mattrass; and he is moreover entitled to have every day at dinner and supper one plate of rice, a piece of mutton, and bread and water; so that a janizary may easily save the greatest part of his pay.

The uniform or clothing of a janizary is a *dolimaun*, or long robe with short sleeves. It is tied round the middle with a striped girdle of different colors, fringed at the ends with gold or silver. They wear over the *dolimaun*, a *saphi*, or blue surtout, in the same loose manner that Europeans wear great coats or cloaks.

Instead of a turban the janizaries have their heads covered with a *zarcola*, or cap made of felt, from which hangs a long hood of the same stuff, that reaches to their shoulders, and is worn on parade days. The zarcola is decorated with a quantity of long feathers, that are fixed in a small tube, and stand in the front of the cap. The janizaries in Constantinople usually carry a long stick or Indian cane, without any other arms or weapons; but when they are equipped for the field against any European power, they have a sabre and fusil or musquet. They likewise carry a powder horn, which hangs on the left side suspended from a leathern string that is thrown across the body.

In Asia, the janizaries always go armed with a bow and a quiver full of arrows. They are thus equipped on account of the scarcity of gunpowder.—They have besides a sort of poniard or large knife, which they draw against every person from whom they wish to extort any thing. The bows and arrows are regularly delivered out to the janizaries by the *alkitef-ter-dars* or vice treasurers general.

The janizaries seldom marry, or if they do it is at an advanced age; for the Turks as well as other countries imagine that a married man cannot be so determined and careless of danger, as he must be who has no concerns to attend to besides his own. Matrimony, however, is not forbidden amongst them. On the contrary, when the ceremony is performed with the consent of their officers, they are permitted to take private lodgings, and are only required to appear every Friday at their rooms, and to parade before the *Wekilbarg*, or treasurer to the chamber, under pain of forfeiting their subsistence. When they get children, their pay is increased some aspres per day, by order of the grand Signor.

The body of janizaries is by no means, however, so considerable as it formerly was. In 1648, they were so formidable, that they assumed a dangerous influence over the government of the Empire. They even went so far as to dethrone the sultan Ibrahim, and afterwards to strangle him in the castle called the Seven Towers. Since that period the grand viziers have made a point to lower the pride and arrogance of the janizaries, in order to preserve the authority of their sovereigns, and to maintain their own: on this account they adopted the barbarous policy of sending the bravest on a forlorne hope at the siege of Candia; and they permitted the rest to marry, and to embrace various trades, contrary to the established rules of the corps, for the sole purpose of enervating the individuals belonging to it. By degrees persons without experience and addicted to the loosest effeminacy, were entrusted with commands; so that the janizaries soon came not to possess either the character or the bravery of their predecessors.

The remedy has been as fatal as the disease; they have had a profligate rabble in place of their hardy and enterprizing corps; and in the year 1808, deposed and put to death the grand Signor, for a bribe from a foreign ambassador.

The janizaries consist chiefly of Christian children that have been taken in war, or of debauched Turks who are ignorant of their birth or connexion. Whenever any one dies, he leaves what little property or clothing, &c. he possesses to his messmen; even the Turks, from a species of social piety, always bequeath something to their particular *oda*, or chamber. The consequence of which is, that the chambers become extremely rich, and their wealth is frequently put out to interest at 25 per cent. Add to this, that the grand Signor directs that every thing which is supplied to the janizaries should be rated lower than to the rest of his subjects, which circumstance easily explains why the janizaries can live cheaper than other people in Turkey.

JANIZAR AGASI, a name or military title which is attached to the person who has the chief command of the janizaries. It corresponds, in some degree, with the rank of colonel general of infantry in old France, when that body was under the command of the duke of Epernon, and afterwards under the duke of Orleans in 1720. This *Aga* takes precedence of all the infantry officers belonging to the Ottoman empire. The name is derived from *Aga*, which, in the Turkish language, signifies a staff, or baton. On public occasions the Aga always bears a staff in his hand; so indeed do all the janizaries when they appear in any large town or place, as an emblem of service.

This general was originally promoted to the rank of Aga out of the corps of janizaries. But as this was the occasion of much jealousy, and gave rise to various cabals, which frequently rendered the Aga contemptible in the eyes of his followers, the grand Signor at present appoints him from the Ichnoglans belonging to the seraglio.

The daily pay of the Aga amounts to one hundred aspres, which are equal to 20 ecus, or French half-crowns, making 55 cents of our money; independent of which he receives from 7 to 10 thousand French ecus or English half-crowns, on account of the Timars who are attached to his appointment. He moreover gets constant presents from the Sultan, especially when the janizaries have conducted themselves to his satisfaction on any critical emergency. The douceurs which are lavished upon the Aga, whenever he has the good fortune to stand well with the grand Signor, are innumerable; for it is through him, that every application is made for places of emolument. It is customary, however, in Turkey to bestow rank and advantageous posts not according to merit, but in proportion to the number of purses, (in which manner all large sums are counted) that are produced by the several candidates. A purse in Turkey contains about 250 crowns, or 300 of our dollars.

The Aga seldom appears in the streets of Constantinople without being followed by a large body of janizaries, most especially when any convulsion or disastrous event has happened in the empire. In these moments of public disturbance and consternation, the janizaries take occasion to demand an increase of pay threatening, in case of refusal, to pillage the town:

which threat they have often put in execution. Whenever these mutinous proceedings take place, the Aga marches at the head of 30 or 40 *mungis* or provost-marshals belonging to the janizaries, together with 5 or 600 of this militia, in order to seize the mutineers, and to have them safely conveyed to some prison. He has the power of life and death over every individual of the corps; but he never gives directions to have a janizary executed in open day, lest the sight of their suffering comrade should create a disturbance among the rest. Small crimes and misdemeanors among the janizaries are punished by the bastinado, which is exercised by striking repeated blows upon the sole of the foot: but when the guilt is capital, the Aga orders the culprit either to be strangled, or to be sewed up in a sack and thrown into a pond or river.

When the Janizar-Agasi dies, from disease or by violence, the whole of his property devolves to the treasury belonging to the corps of janizaries; nor can the grand Signor appropriate one aspre to his own use.

JAVELIN, a sort of spear 5 1-2 feet long, the shaft of which was of wood with a steel point. Every soldier in the Roman armies had seven of these, which were very light and slender.

The Velites or light armed troops among the Romans were armed with javelins. They were two cubits long and one inch thick.

There were several sorts of javelins or darts used among the ancients; some of which were projected by the help of a short strap girt round their middle.

There was likewise another species of javelin, the bottom of which was ornamented with three feathers, in the same manner that arrows and darts are. These javelins have been used by the Poles and other nations, but principally by the Moors, who call them *zogaies*. In the early days of France, the javelin was likewise adopted in imitation of the Gauls; but it disappeared, with many other missile weapons, on the invention of fire-arms.

JAVELINE, *Fr.* See Javelin.

JEVELOT, *Fr.* Javelin. A term used among the ancients to express every thing that was missile; it is derived from the Latin, *jaculum à jaculando*.

JAZERAN, *Fr.* an obsolete term which was formerly applied to an able veteran.

ICH DIEN, *I serve.* A motto belonging to the badge of the arms of the British prince of Wales, which was first assumed by Edward surnamed the Black Prince, after the battle of Cressy in 1346. *Dieu et Mon Droit*, in the badge of the British king's arms, was used by Richard I. on a victory over the French in 1194.

ICHNOGLANS. It has been a singular maxim of policy among the Turks to prefer Christian slaves, as confidential servants, to their own countrymen. Their motive originates in an idea, that the former having lost all recollection of their native spot, and of the tenderness which is innate between child and parent, would have no other interest at heart but that of their employers; whereas freemen in general measure their attachment to their masters by the rule of self accommodation and personal emolument. From these principles the grand Signor has established a body of Ichnoglans, in order that they may be devoted to his service; and as a security for their affection he frequently raises individuals amongst them to the highest posts of trust and dignity in the empire. The rank of *Sepaler Agasi*, or general of cavalry, has been conferred upon them; which appointment, next to that of grand vizir, of Mufti or of Bostangi, is the most considerable belonging to the Ottoman empire.

ICHNOGRAPHIE, *Fr.* Ichnography.

ICHNOGRAPHY, in fortification, denotes the plan or representation of the length and breadth of a fortification; the distinct parts of which are marked out either on the ground itself, or on paper. By this we are at once acquainted with the value of the different lines and angles which determine the exact breadth of fossés, the depth of ramparts, and of parapets. So that, in fact, a plan, upon the correct principles of ichnography, represents a work as it would appear if it were levelled to its foundations, and shewed only the expanse of ground upon which it had been erected. But the science of ichnography does not represent either the elevation or the depth of the different parts belonging to a fortification. This properly comes under profile, which does not, however, include length. See Plan.

JEE, *Ind.* a title of respect which is used in India, and signifies sir, master, worship.

Jee Potr, *Ind.* a statement and decree.

JEHAUNDER, *Ind.* a term used in India, signifying the possessor of the world.

JEHAUN GEER, *Ind.* a term used in India, signifying the conqueror of the world.

Jehaun Shah, *Ind.* king of the world.

JEHOULDAR, *Ind.* Treasurer.

JELOUDAR, *Ind.* belonging to the train or equipage.

JEMADE, *Ind.* the Indian word for month.

JEMIDAR or JEMMADAR, *Ind.* means a captain or chief of a company; it is the title of a black officer who has the same rank as a white lieutenant in the E. India company's service. The author of the history of the Carnatic calls Jemidars or Jemmadars, captains either of horse or foot.

JENIZER-EFFENDI, an appointment among the Turks, which in some degree resembles that of provost-marshal in European armies. The only functions which this officer is permitted to exercise are those of judge to the company He sits on particular days for the purpose of hearing the complaints of the soldiers, and of settling their differences. If a case of peculiar difficulty should occur, he reports the same to the Aga, whose opinion and determination are final.

JERSEY, an island on the coast of Normandy in France, which has belonged to the English ever since the Norman conquest. Although this island, as well as that of Guernsey, is still governed by the ancient Norman laws, it is nevertheless subject to the British mutiny act in many particulars.

JERUMONA, *Ind.* Mulct, fine, or penalty.

JETH, *Ind.* the name of a month which in some degree coincides with our month of May.

JET, *Fr.* a term signifying the motion of any body that is urged forward by main force; it likewise means the space which is gone over by any propelled body.

Jet *des bombes*, Fr. This word has been adopted instead of *Tir*, which formerly expressed the course that a shell took when it was thrown out of a mortar by the power of gunpowder.

We sometimes use the words *flight* and *range*, to express the same action and progress.

The jet or flight of a bomb usually forms a curved line; but many engineers assert, that when the mortar is placed horizontally, it describes the three movements that are made by a cannon ball, viz. The violent or strait forward one, the mixed or curved, and the natural one, which is perpendicular.

It is particularly incumbent upon the officers who superintend the mortar duty, to ascertain, by a correct observation of the eye, the exact distance to which he means to throw the bomb. With this view he must give as many degrees of elevation as may be found necessary by the judgment he has formed.

In order to obtain some degree of certainty he first throws a bomb, by way of experiment, and he increases or diminishes his degrees of elevation according to the distance it runs, and from the spot on which it falls.

These are the only rules which are generally followed by those officers who have the direction of mortars. However, according to St. Remi the French bombardiers frequently make use of tables in order to calculate precisely the different lines of extent according to the different elevations of the mortar, particularly with respect to the degrees of the square rule from 1 to 45.

Although this method has been sanctioned by various and innumerable experiments, it has nevertheless been exposed to some censure. Mr. Blondel has written a treatise on the subject. This engineer asserts, that he has discovered a way of firing true, which exceeds all former inventions

We are of opinion, that the best method must be that which is founded upon practical and daily experience. Those men who are in the continual habit of exercising in mortar duty, and who can form just calculations, especially with regard to the quality and quantity of gunpowder, will always be esteemed in preference to the most profound theorists.

According to the experiments which have been made by bombardiers with respect to the flight of bombs, a mortar is said to propel or urge forward in proportion to the quantity and quality of the gunpowder, by which it is charged.

A mortar, for instance, which has twelve inches calibre, and which is loaded with two pounds of mealed gunpowder gives a difference in its flight of 48 feet from one degree to another; and 2160 feet in its greatest extent under the elevation of 45 degrees.

The same mortar gives a difference, from one degree to another, of 60 feet, provided there be two pounds and a half of the same powder in its chamber, and it gives 2700 feet for its greatest flight.

It finally gives 72 feet difference from one degree to another, if the charge consists of three pounds of mealed gunpowder, and the elevation be taken at 45 degrees, which in the opinion of bombardiers, is the greatest flight, taking a range of 3240 feet.

Among the French bombardiers there are tables put out according to this calculation, which may be found in Blondel or St. Remi. These tables are adapted to mortars of 12 inches calibre, which weight we have taken for example.

Jet, among the French is likewise applied to the range taken by a fusee, as *jet de la fusee*, the flight of a fusee,

In cannon founderies it is further used to express the different pipes or hollows which are made [illegible] or wax, in order to convey the liquid metals into their moulds. In this sense it means *cast*, so that *jet* may be properly called a vent or aperture which is made at the extreme end of the mould and through which the metal is poured.

Un beau **Jet**, *Fr.* a fine cast.

JETTER, *Fr.* to pour metal into a mould.

JETTEE, *Fr.* a pier. It usually consists of a projection, made with stone, brick or wood at the extreme ends of a harbor, for the purpose of resisting the impetuosity of the waves.

JEU *de hazard*, Fr. chance play. It was our intention to have entered fully into this subject, as far as it concerns the military system, under the head *hazard*; but as the matter has been more particularly adverted to in a French author, we judge it best to quote from that authority, and to shew, that, corrupt as the old government of France most unquestionably was, the character of its army was not neglected. Every species of chance play was strictly forbidden in the French camps and garrisons, and throughout their armies. The prohibitions on this head bear the most ancient dates. On the 24th of July, 1534, Francis I. issued an order, which was again confirmed by Henry II. on the 22d of May, 1557, that no comrade should, under any pretext whatever, obtain money from a brother soldier by play. It was further ordained, that in case of foul play, the persons who should be discovered were, for the first offence, to be publicly flogged, and for the second to be punished in the like manner, to have their ears cut off, and to be banished for ten years. The delinquents were committed to the charge and custody of the provost, who was authorized to confiscate every farthing that was played for. Dice and cards were rigorously forbidden under the same penalties, as well as all sorts of games which might create animosities and dissentions among individuals.

On the 15th of January, 1691, Louis XIV issued an order from the privy council, by which he expressly forbade not only the officers belonging to his army, but likewise all other persons of whatever sex or denomination to play at *Hoca*, *Pharoah*, *Barbacole*, *Basset*, *and Pour et Contre*. The penalties for every infraction or breach of this order were as follows. Those persons who played were fined 1000 livres or 200 dollars, and the master or mistress of the house where games of the above description were allowed, stood fined in 6000 livres, or 1200 dollars for each offence. One third of these penalties was applied to his majesty's use, one third to the relief of the poor of the place where the offence was committed, and the other third was paid to the informer. It was further ordained, that in case the persons so discovered were unable to pay the fines, their persons should be taken into custody. Those subjected to the penalty of 1000 livres were imprisoned four months, and those who incurred the fine of 6000 livres, without having the means to pay it, were imprisoned one year. The intendants, or lord-lieutenants of the provinces and armies, the police magistrates, and the military provosts, were all and severally directed to see this edict put into execution; and by a circular letter, which in 1712, was written, in the king's name, by M. Voisin, to the different governors and lords-lieutenants of provinces, the prohibitions were extended to the lansquenet, or private soldier.

On the 25th of August, 1698, Louis XIV. issued out an order, by which he rigorously forbade, under pain of death, every individual belonging to the French cavalry or infantry, (suttler and private soldier included) to keep any gaming table in camp or quarters. In consequence of these regulations, and with the view of introducing the strictest principles of honor and regularity in a profession which must be tarnished even by the breath of suspicion, on the 1st of July, 1727, Louis the XVth ordained by the 43d article of war, that whatsoever soldier, horse or foot, was convicted of cheating at play, should be punished with death. He further directed, that in case any hazard table should be set up in a camp, or garrison, the commanding officer or governor was to order the same to be broken forthwith, and to commit all persons concerned therein to prison.

JEWAER KHANNA, *Ind.* The jewel office.

IHTIMAMDAR, *Ind.* A person appointed by the Hindoo magistrate, who has the superintending agency over several towns.

IJELAS, *Ind.* The general assembly of the court of justice in Bengal, so called.

To IMBODY, in a military sense, implies to assemble under arms, either for defence or offence. This term is particularly applied to the meeting of the militia.

IMPETUS, in mechanics, the force with which one body impels or strikes another. See GUNNERY. MOMENTUM.

IMPOSTS, that part of a pillar in vaults or arches, on which the weight of the whole rests.

IMPREGNABLE. Any fortress or work which resists the efforts of attack, is said to be impregnable.

To IMPRESS, to compel any body to serve.

IMPRESS-*Service*, A particular duty which is performed by persons belonging to the navy. Soldiers, that behave ill, in the British service, and from repeated misconduct are deemed incorrigible on shore, get frequently turned over to a press gang. This does not, however, occur without some sort of concurrence on the part of the soldier, who is left to chuse between the execution or continuance of a severe military punishment, or to enter on board one of the ships of war.

IMPRESS-*Money*. All sums which are paid to men who have been compelled to serve are so called.

IMPRESSION, the effect of an attack upon any place, or body of soldiers.

IMPREST *of Money*. A term not strictly grammatical, but rendered familiar by its official adoption, signifying sums of money received from time, to time, by persons in public employment, for the current services of the year.

To IMPUGN, to attack, or assault.

IMPULSE, hostile impression.

INACCESSIBLE, not to be approached, in contradiction to accessible.

INCAPABLE. A term of disgrace, which is frequently annexed to military sentences; as, such an officer has been cashiered by the sentence of a general court-martial, and rendered *incapable* of ever serving his majesty in either a civil or military capacity.

INCH, a well known measure in length, being the 12th part of a foot, and equal to three barley-corns in length. See MEASURE.

INCIDENCE, the direction with which one body strikes another; the angle made by that line and the plane of the body struck, is called the Angle of Incidence, which see.

INCLINAISON, *Fr.* See INCLINATION.

To INCLINE, in a military sense, means to gain ground to the flank, as well as to the front. Inclining is of great use in the marching of the line in front, to correct any irregularities that may happen. It is equivalent to the quarter facing and to the oblique marching of the infantry. It enables you to gain the enemy's flank without exposing your own, or without wheeling or altering the parallel front of the squadron.

Right (or left) INCLINE. A word of command in cavalry movements, when each man makes a half-face on his horse's fore feet, by which means each will appear to be half a head behind his flank leader; and the whole will look to the hand to which they are to incline. It must be generally observed, that the leading officer on the flank, with a glance of his eye ascertaining his points, marches steadily upon them, at whatever pace is ordered: every other man in the squadron moves in so many parallel lines, with respect to him, and preserves the same uniformity of front and files, as when he first turned his horse's head.

At no time of the incline ought the former front of the squadron, or distance of files to be altered.

In the incline, the rear rank moves in the same manner, and is of course regulated by the front rank, which it takes care to conform to.

Whenever a squadron inclines it must not pass an angle of 34° with respect to its former direction, unless it should be required to gain as much or more ground to the flank as to the front. The distance of files at six inches allows the squadron to incline in perfect order, while its new direction does not go beyond the angle specified. When more is required to be taken, the squadron must either wheel up, and march upon the flank point, or it will fall more or less into file, according to the degree of obliquity required, by moving each horse retired, half neck, or head to boot.

INCLINED *Plane.* See GUNNERY.

INCLUSIVE, comprehended in the sum or number; thus when the abstracts were made out for 60 and 61 days, they generally ran from the 24th of one month to the 24th of the second month, including the last 24th *only*. Since the new British regulation, the muster, as also the abstract, is taken from the 25th of one month to the 24th of the following month, both days *inclusive*.

INCOMMENSURABLE. That cannot be measured, or be reduced to any proportion or equal measure with another.

INCOMPETENT. Incapable, unfit, unequal. No officer, be his situation what it may, (from a general inclusive to the lowest non-commissioned) can be said to be *competent* to command, who is not only willing and able to follow orders himself, but will likewise see them strictly adhered to by others; whose mind is not superior to partialities, and whose judgment is not equal to discern real merit from ignorant assumption. Every soldier is incompetent to his profession who does not possess a spirit of subordination, and cool determined bravery.

INCOMPLETE, opposed to complete, which see.

To INCORPORATE. In a military sense, is to add a smaller body of forces to a large, and to mix them together. Independent companies are said to be incorporated, when they are distributed among different regiments, regiments among brigades, &c. &c. So that any lesser body may be incorporated in a greater.

INCURSION, invasion without conquest; inroad; ravage.

INDEMNIFICATION, any reimbursement or compensation which is given for loss or penalty.

Military INDEMNIFICATION, a regulated allowance which is made by the British for losses sustained by officers or soldiers on actual service, viz.

Infantry.

1st. The whole of the personal baggage of a subaltern officer to be valued at 60*l.* and the camp equipage between two subalterns, 35*l.*

2d. The baggage of a captain to be valued at 80*l.* and the camp equipage, at 35*l.*

3d. Field officer's baggage, 100*l.* and the camp equipage 60*l.*

4th. Colonel's baggage, 120*l.* and camp equipage, 80*l.*

Cavalry.

5th. The whole of the personal baggage of a subaltern officer to be valued at 70*l.* and the camp equipage at 45*l.*

6th, Captain's baggage, 90*l.* and camp equipage 45*l.*

7th. Field officer's baggage, 120*l.* and camp equipage 90*l.*

8th. Colonel's baggage, 140*l.* and camp equipage, 90*l.*

9th. Officers giving certificates signed by themselves and the commanding officer of their regiments, that they have lost the whole of their baggage and camp equipage, and that at the time it was lost, they were in no respect deviating from the orders of the general officer commanding in chief relative to baggage, shall receive the whole of the sums above allotted, according to their ranks.

10th. Officers losing any part of their baggage, are to give in similar certificates, according to the best of their belief and judgment, without entering into particulars, but estimating their loss at one-fourth, one-half, or three-fourths of the whole value, according to which they shall be paid the like proportion of the above sums.

11th. The whole baggage of a quarter-master of cavalry shall be estimated at 40*l*. A quarter-master losing the whole or any part of his baggage, must produce certificates from the officer commanding, and from his captain, as to the quantity of his baggage, which to the best of their belief and judgment has been lost, according to which he will receive the whole or a proportion, of the above sum of 40*l*.

12th. The baggage and camp equipage of all staff officers of both cavalry and infantry, are to be valued as those of subaltern officers, except for such as are allowed a tent to themselves, whose camp equipage in that case will be valued as that of a captain.

13th. A serjeant of cavalry losing his necessaries, without any fault of his own, shall receive 2*l*. 15*s*.

14th. Corporal, trumpeter, or private, 2*l*. 10*s*.

15th. Serjeant of infantry, 2*l*. 10*s*.

16th. Corporal, drummer, or private, 2*l*. 2*s*.

17th. A servant, not being a soldier, 3*l*. 8*s*

The certificates in these five cases to be the same as in the case of the quarter-master.

Officers on actual service, whose horses shall be killed or taken by the enemy, or shall be shot for the glanders, receive allowances by way of indemnification for them, according to the following rates; viz.

Cavalry.

Heavy dragoons, first charger, 47*l*. 5*s*.
Light dragoons, first ditto. 36*l*. 15*s*.
Heavy or light ditto, second ditto, 31*l*. 10*s*.
Quarter-master's horse, 29*l*. 8*s*.

Infantry.

Field officer's charger, 31*l*. 10*s*.
Adjutant's ditto, 31*l*. 10*s*.
Chaplain's and subaltern's horses, each 18*l*. 18*s*.
Bat horses, (both cavalry and infantry) 18*l*. 18*s*.
General officer's first charger, 47*l*. 5*s*.
Second ditto, 31*l*. 10*s*.

Aids de camp, brigade majors, and other staff officers, whose situations require their keeping good horses, receive as the light dragoons.

Staff officers, for whom inferior horses are deemed sufficient, 18*l*. 18*s*.

Certificates, stating the particular circumstances and causes of the loss of the horses, are to be signed by the officers themselves, and by the commanding officers of their regiments.

And the general officers commanding in chief on the different foreign stations, are to decide on the claims preferred in their respective districts of command upon the ground of this regulation, and to grant payment accordingly.

INDEMNITY, a security or exemption from penalty, loss, or punishment. It is sometimes connected with amnesty. Thus Charles the second on his restoration, endeavored to conciliate the minds of his subjects, by promising amnesty and indemnity to the different parties that had been directly active, indirectly instrumental, or passively the means of his father's death.

To **INDENT**, a word particularly made use of in India for the dispatch of military business. It is of the same import and meaning as to draw or set a value upon. It likewise means an order for military stores, arms, &c. As an indent for new supplies, &c.

INDENTED *line*, in fortification, is a line running out and in like the teeth of a saw, forming several angles, so that one side defends another. They are used on the banks of rivers, where they enter a town; the parapet of the covert-way is also often indented.—This is by the French engineers called *redans*. Small places are sometimes fortified with such a line, but the fault of such fortifications is, that the besiegers from one battery may ruin both sides of the *tenaille* of the front of a place, and make an assault without fear of being enfiladed, since the defences are ruined.

INDEPENDENT, in a military sense, is a term which distinguishes from the rest of the army, those companies that have been raised by individuals for rank, and were afterwards drafted into corps that were short of their complement of men.

INDEPENDENT COMPANY, } is one
INDEPENDENT TROOP, } that is not incorporated into any regiment.

INDIAN *Camp*. An Indian camp may be considered as one of the loosest assemblages of men, women, and children, that can perhaps, be imagined.

Every common soldier in the army is accompanied with a wife, or concubine; the officers have several, and the generals whole seraglios; besides these the army is encumbered by a number of attendants and servants, exceeding that of the fighting men; and to supply the various wants of this enervated multitude, dealers, pedlars, and retailers of all sorts, follow the camp, to whom a separate quarter is allotted, in which they daily exhibit their different commodities, in greater quantities, and with more regularity, than in any fair in Europe; all of them sitting on the ground in a line, with their merchandize exposed before them, and sheltered from the sun by a mat supported by sticks.

Indian *Engineers.* Mr. Orme, in his history of the Carnatic, affords an instance of the art of engineering being known, and cultivated by the native Indians. In page 265, he gives the following account of a place called Chinglapet, which had been fortified by an Indian engineer. Chinglapet is situated about 30 miles west of Covelong, 40 south-west of Madras, and within half a mile of the northern bank of the river Paliar. It was, and not without reason, esteemed by the natives, a very strong hold. Its outline, exclusive of some irregular projections at the gateways, is nearly a parallelogram, extending 400 yards from north to south, and 320 from east to west. The eastern and half the northern side, is covered by a continued swamp of rice-fields, and the other half of the north, together with the whole of the west side, is defended by a large lake. Inaccessible in these parts, it would have been impregnable, if the south side had been equally secure; but here the ground is high, and gives advantages to an enemy. —The Indian engineer, whoever he was that erected the fort, seems to have exceeded the common reach of his countrymen in the knowledge of his art, not only by the choice of the spot, but also, by proportioning the strength of the defences, to the advantages and disadvantages of the situation: for the fortifications to the south are much the strongest, those opposite to the rice-fields, something weaker; and the part that is skirted by the lake, is defended only by a slender wall: a deep ditch 60 feet wide, and faced with stone; a *fausse braye*, and a stone wall 18 feet high, with round towers, on, and between the angles, form the defences to the land: nor are these all, for parallel to the south, east, and north sides of these outward works, are others of the same kind, repeated within them, and these joining to the slender wall, which runs to the west along the lake, form a second enclosure of fortification.

Indian *Fortification.* The entrance into an Indian fortification is through a large and complicated pile of buildings, projecting in the form of a parallelogram from the main rampart; and if the city has two walls, it projects beyond them both: this building consists of several continued terraces, which are of the same height as the main rampart, and communicate with it; the inward walls of these terraces, form the sides of an intricate passage about 20 feet broad, which leads by various short turnings at right angles, through the whole pile to the principal gate, that stands in the main rampart. We have extracted this passage, from the History of the Carnatic, as affording a general outline of Indian fortification. In the same place may be seen, (page 320) the following description of a battery; which was built by the English in 1753, and contributed to the preservation of Tritchinopoly, when the French attempted to storm that place.

This battery was called Dalton's battery, from an officer of that name, who, when intrusted with the command of the garrison, had converted that part of the gateway which projected beyond the outward wall, into a solid battery, with embrasures; having the part between the two walls, as it stood with its windings and terraces: an interval was likewise left between the backside of the battery and the terrace nearest to it, which lay parallel to each other; so that an enemy who had gained the battery, could not get to the terrace, without descending into the interjacent area, and then mounting the wall of the terrace with scaling ladders: the battery, however, communicated with the rampart of the outward wall of the city, but being, as that was, only eighteen feet high, it was commanded by the terraces behind it, as well as by the rampart of the inner wall, both of which, were thirty feet high; upon one of the inward cavaliers, south of the gateway, were planted two pieces of cannon, to plunge into the battery, and scour the interval between the two walls, as far as the terraces of the gateway; and two other pieces, mounted in the north-west angle of the inward rampart, commanded in like manner, both the battery and the interval to the north of the terraces.

Indian *Guides.* According to the ingenious author of the history of the Carnatic, these men are not to be depended upon. In page 217 he relates, that on the 1st of April, 1752, at night, a captain Dalton was ordered with 400 men to march, and, by taking a large circuit, to come in at the eastern extremity of the enemy's camp, which he was to enter, beat up, and set fire to. The English troops, from their long inactivity, knew so little of the ground about Tritchinopoly, that they were obliged to trust to Indian guides; and these being ordered to conduct them out of the reach of the enemy's advanced posts, fell into the other extreme, and led them several miles out of their way, and through such bad roads, that when the morning star appeared, they found themselves between Elimiscram and the French rock, two miles from Chunda Saheb's camp, and in the centre of all their posts.

Indian *princes and their troops.* Their military character may be collected from the following curious account, which is given of a circumstance that occurred in the Tanjore country, when the English obtained a signal victory over the French and Mysoreans, in 1753. The presence of the nabob being thought necessary to facilitate a negociation that was then judged expedient to undertake, he prepared to march with the English army; but on the evening he intended to quit the city, his discontented troops assembled in the outer court of the palace, and clamoring, declared, that they would not suffer him to move, before he had paid their arrears; in vain were arguments used to convince this rabble, more insolent because they had never rendered any effectual service, that his going to Tanjore was the only measure from which they could hope for a chance of receiving their pay: they remained inflexible, and threatened violence; upon which captain Dalton, a British officer, sent a messenger to the camp, from whence the grenadier company immediately marched into the city, where they were joined by 100 of the garrison of Tritchinoply, and all together forcing their way into the palace, they got the nabob into his palanquin, and escorted him to the camp, surrounded by 200 Europeans with fixed bayonets; the malcontents not daring to offer him any outrage as he was passing, nor on the other hand, was any injury offered to them: for notwithstanding such proceedings in more civilized nations rarely happen, and are justly esteemed mutiny and treason; yet in Hindustan they are common accidents, and arise from such causes as render difficult to ascertain whether the prince or his army be most in fault. The nabob had certainly no money to pay his troops; so far from it, that the English had now for two years furnished all the expences of their own troops in the field. but it is a maxim with every prince in India, let his wealth be ever so great, to keep his army in long arrears, for fear they should desert. This apprehension is perhaps not unjustly entertained of hirelings collected from every part of a despotic empire, and insensible of notions of attachment to the prince or cause they serve; but from hence the soldiery, accustomed to excuses when dictated by no necessity, give no credit to those which are made to them, when there is a real impossibility of satisfying their demands; and a practice common to most of the princes of Hindustan, concurs not a little to increase this mistrust in all who serve them; for on the one hand, the vain notions in which they have been educated, inspire them with such a love of outward shew, and the enervating climate in which they are born, renders them so incapable of resisting the impulses of fancy; and on the other hand, the frequent reverses of fortune in this empire, dictate so strongly the necessity of hoarding resources against the hour of calamity, that nothing is more common than to see a nabob purchasing a jewel or ornament of great price, at the very time that he is in the greatest distress for money to answer the necessities of the government. Hence, instead of being shocked at the clamors of their soldiery, they are accustomed to live in expectation of them, and it is a maxim in their [illegible] to hear them with patience, unless the crowd proceed to violence; but in order to prevent this, they take care to attach to their interest some principal officers, with such a number of the best troops, as may serve on emergency to check the tumult, which is rarely headed by a man of distinction. But when his affairs grow desperate by the success of a superior enemy, the prince atones severely for his evasions, by a total defection of his army, or by suffering such outrages as the Nabob Mahomed-Ally would in all probability have been exposed to, had he not been rescued in the manner we have described.

Military **INDICATIONS.** (*Indices*, Fr.) Marshal Saxe very judiciously observes, that there are indications in war which every officer should attend to, and from which deductions and conclusions may be drawn with some degree of certainty. A previous knowlege of your enemy's national character and customs, will contribute not a little towards the attainment of this object. Every country indeed has customs and usages which are peculiar to itself. Among various indications that we might adduce, let us suppose these leading ones by which the intentions of an enemy may be discovered by the garrison of a besieged town. If, for example, towards the close of day groupes or loose parties of armed men should be discovered upon the neighboring heights which overlook and command the town, you may remain assured, that some considerable attack is in agitation. Small detachments from the different corps are sent forward for this purpose, and the besieging army is thereby apprized of the business; as the heights are occupied in the evening by the parties in question, in order that they may be thoroughly acquainted with the leading avenues, &c.

When much firing is heard from an enemy's camp, and another army lies encamped near, the latter may conclude, that an engagement will take place the following day; for it must be evident, that the soldiers are cleaning and trying their musquets.

Marshal Saxe further remarks, that a considerable movement in an enemy's army may be discovered by any large quantity of dust, which is a sure indication of it. The reflection of the sun upon the firelocks of an army will likewise lead to some knowlege of its position. If the rays are collected and perpendicular, it is a certain indication, that the enemy is advancing towards you; if they disappear at times and cast a broken radiance, you may conclude, that he is retreating. If the troops move from right to left, their line of march is towards the left; if from left to right, the line of march is towards the right. Should considerable clouds of dust be seen to rise from an enemy's camp, and it be ascertained, that he is in want of forage, it may fairly be inferred, that the train of waggoners and purveyors, &c. are moving, and that the whole will follow shortly.

If the enemy, observes the same writer, has his camp-ovens on the right or left, and you are covered by a small rivulet, you may make a flank disposition, and by that manœuvre, suddenly return and detach ten or twelve thousand men to demolish his ovens; and whilst you are protected by the main body of the army which is ordered to support the first detachment, you may seize upon all his flour, &c. There are innumerable stratagems of this sort which may be practised in war, and by means of which, a victory may be obtained without much bloodshed on your part, and at all events with considerable disadvantage to the enemy.

INDIES (East). According to the geographical description of the East Indies, they must be considered as being divided into two principal parts, viz. India within the river Ganges, and India beyond the river Ganges.

India, *within the river Ganges*. This division consists of a country, which is situated between the latitudes of 6 and 34 degrees north, and between 53 and 91 degrees of east longitude. A great part of this space is covered with the sea. India within the Ganges is bounded on the north by Usbec Tartary, and part of Thibet, by the Indian ocean on the south; by Great Thibet, India beyond the Ganges, and the bay of Bengal on the east, and by Persia and the Indian ocean on the west. The chief mountains are those of Caucasus, Naugracut, and Balahaut, which run almost the whole length of India from north to south.

India *beyond the Ganges*. This division consists of a country, which is situated between the latitudes of one and 30 degrees north, and between the longitudes of 89 and 109 degrees east. Great part of these limits is covered by the sea. It is bounded on the north by Thibet and China, by China and the Chinese sea on the east; by the same sea and the streights of Malacca on the south, and by the bay of Bengal and part of India on the west.

To enter into the extent of the British possessions in this quarter of the globe, would be to exceed the limits of our undertaking in a considerable degree, without materially aiding its principal object, which is military information. We shall therefore content ourselves with giving, in a brief and succinct manner, a view of those establishments which constitutes the Indian army.

According to the last printed oriental register, the army in India is composed of one corps of engineers, two artillery regiments, eight regiments of cavalry, two regiments of European infantry, and forty regiments of native infantry, divided into brigades of 6 regiments each.

The military board consists of one lieutenant-general, two major-generals, one colonel, two lieutenant-colonels, two captains and one lieutenant.

The military offices and departments are superintended by one military auditor-general, one deputy military auditor-general, one first assistant and accomptant, one military pay-master general, one deputy pay-master general, one adjutant-general, one deputy adjutant-general, one secretary to the military board, one first assistant, one quarter-master general, one deputy quarter-master general, one surveyor general, one assistant to ditto, one judge-advocate general, one deputy judge-advocate at Dinapore and Chunar, one ditto at Cawnpore and Futtygur, one superintendant of powder-works, one assistant ditto.

The army stations in India, with their appropriate public staffs are;—

Fort-William, under one major-general commanding at the presidency, who has one aid-de-camp, one head surgeon, one chaplain, one pay-master; and we presume, one brigade-major.

Barrackpore, under one captain commandant, who has one brigade-major, and one chaplain.

Berhampore, under one major-general, who commands the station, and has one aid de-camp, one brigade-major, one chaplain, and one deputy pay-master.

Dinapore, under one major-general, who has one aid-de-camp, one brigade-major, one pay-master, one head surgeon, and one chaplain.

Chunar, under one major-general officer, who commands the station, and has one aid-de-camp, one brigade-major, one head surgeon, one deputy pay-master, and one chaplain.

Cawnpore, under one major-general who commands the station, and who has one secretary and Persian interpreter in the field, one aid-de-camp, one head surgeon, one brigade-major, one deputy pay-master, and one chaplain.

Futty Ghur, under one major-general commanding, who has one aid-de-camp, one brigade-major, one surgeon, one chaplain, and one pay-master.

Hydrabad detachment, under the command of one lieutenant-colonel, one major of brigade, one deputy commissary of ordnance, one deputy pay-master, and one Persian interpreter.

Prince of Wales's Island, under one captain commandant, one captain subordinate to him, one lieutenant, who is deputy commissary of ordnance, one pay-master, one engineer, having the rank of lieutenant, one surgeon, and one assistant-surgeon.

The cantonments and garrisons consist of the following:—

Barrackpore, where there is one barrack-master.

Berhampore, where there is one barrack-master, and one engineer.

Dinapore, with one barrack-master, and one engineer.

Midnapore, with one adjutant and quarter master.

Fort-William, with one fort-major, one barrack-master, one fort-adjutant, one garrison store keeper, one surgeon, and one assistant surgeon.

Mongbyr, under one major-general, who commands; one fort-adjutant, one engineer, and one surgeon.

Buxar, under one major-general commandant, one fort-adjutant, and one assistant surgeon.

Chunar, with one fort-adjutant, and barrack-master, one engineer, and one garrison store keeper.

Allahbabad, with one lieutenant-colonel commandant, one fort adjutant, and one barrack-master.

There is likewise, an establishment for European invalids at Chunar, consisting at present, of one captain from the first company of artillery, two captains from the third company of infantry, two lieutenants, two ensigns, one adjutant, and one quarter-master.

The medical department of India consists of an hospital board, under one first member and director of the hospitals, one second member of the hospital board, one secretary, one surgeon and apothecary, one assistant surgeon and deputy apothecary, one purveyor and contractor for bedding and clothing, one head surgeon at head quarters, and six hospital mates.

The armed force of the East Indies independent of the troops sent from Europe, consists in a marine battalion which has six companies stationed at Bengal, one company at Fort-Marlborough, and one at the Prince of Wales's Island. There is likewise a battalion distinguished by the name of the Ramghur battalion, and a corps of hill rangers. To which must be added the Calcutta native militia, the Hindustan cavalry, and three volunteer battalions serving in the Carnatic.—The Calcutta militia, properly so called, is commanded by the right honorable the governor general. This establishment consists of one troop of cavalry; one infantry battalion, one Armenian corps, and one Portuguese corps.

The general staff of India in 1800, consisted of one commander in chief, one military auditor general, one militar paymaster general, one adjutant general, one quarter-master general, one judge-advocate general, two deputies at Dinapore and Chunar, and Cawnpore, and Futtyghur, one surveyor general, one military secretary to the governor general, four aids-de-camp to the governor general, two aids-de-camp to the commander in chief, one secretary to the commander in chief, one surgeon to the commander in chief, one Persian translator to the commander in chief.

INDOSTAN. This word properly spelled Hindustan; from *Stan* a country, and *Hindus* the people; usually called *India*.

INEXPUGNABLE. See IMPREGNABLE.

INFAMOUS *behaviour*, (*infamie*, Fr.) a term peculiarly applicable to military life when it is affected by dishonorable conduct. Hence the expression which is used in the Articles of War, relative to *scandalous infamous behaviour*; on conviction of which, an officer is ordered to be cashiered. Infamy may be attached to an officer or soldier in a variety of ways; and some countries are more tenacious than others on this head. Among European nations it has always been deemed infamous and disgraceful to abandon the field of action, or to desert the colors, except in cases of the greatest emergency. In Germany, a mark of infamy was attached to the character of every man that was found guilty of misbehaviour before the enemy. He could not assist at the public sacrifices, nor be present at a court-martial. Many destroyed themselves in consequence of the ignominy they suffered on these occasions. According to the old French salique law, any person who should upbraid another with having fled from the field of battle, and not be able to prove it, was heavily fined.

Among the Romans the punctilious nicety of military fame was carried to a much higher pitch. It was considered as infamous and disgraceful to be taken prisoner, and a Roman soldier was impressed with the idea, that he must either conquer or die in the field. Regulus, the Roman general, was so much influenced by these high sentiments, that when the Carthagenians by whom he had been taken prisoner, sent him to Rome, in order to arrange certain conditions of peace, he deemed himself unworthy to appear in the senate, notwithstanding that his fellow citizens invited him to the sitting. The advice which he gave his countrymen, and the punishment he suffered on his retutn to Carthage are well known.

Although these notions have considerably degenerated among the moderns, the military character is nevertheless so far elevated above every other profession in life, that the slightest imputation of cowardice or dishonor is sufficient to affect it. Among the French the most punctilious nicety is observed; so much so, that the common soldier considers himself superior to the lower orders of mankind, and will resent a blow or a lie with a pertinacity of honor, that puts him upon a level with the most scrupulous duellist. How far this sense of honor ought to be encouraged in the ranks we will not pretend to determine. But we shall scarcely be found fault with, or run the hazard of contradiction, when we assert, that no officer ought to hold a commission in any service, who can either take or give the lie, or receive a blow without resenting the insult in the most summary manner. For we may pronounce, that man incapable of doing justice to the service, who can be insensible himself. Nor does the term *infamous* apply in this instance only. There are various cases, in which the conduct of an officer may render him unworthy of the situation he fills: such as cheating at play, taking unfair advantages of youth, imposing upon the credulity or confidence of a tradesman, habitual drunkenness, flagrant breaches of hospitality, &c.

INFANTRY, (*Infanterie*, Fr) This term being little understood with respect to its derivation, and having by some writers been either vaguely interpreted, or erroneously traced, we think it our duty to give the best, and we presume, the only correct explanation of the word. In so doing we should be unthankful to one of the most acute observers in life, and one of the closest reasoners, were we to omit acknowleging that we have been favored by the ingenious and learned author of the *Diversions of Purley*, with the following account of its derivation.

Johnson generally states, that infantry *are foot soldiers belonging to the army;* and the compilers of other dictionaries content themselves with assimilating the term infantry to the name of a Spanish princess, who marched at the head of a body of Spaniards on foot, and defeated the Moors. She was called Infanta. Our learned friend, on the contrary, traces it to the source of genuine etymology, and grounds his opinion upon the best authorities. His first root is from the Greek *phe-mi*, Latin, *Fa-ri*, participle *Fans—In-fans;* Italian, *Infante*, by abridgment, *Fante; Infanteria*, by abridgment, *Fanteria;* French, *Infanterie*; English, *Infantry.*

It is still in French and in English a common expression to soldiers, *allons mes enfans, come on my* lads, (*or my* boys). So a servant is called a *lad* or a *boy* (and formerly a *knave* or a *page*), although a full grown *man.*

The military profession is still called *service;* and a soldier is said to *serve* in the army.

Skinner says well;—"The *infantry*, Fr. G. *infanterie*; Italian, *fanteria*, peditatus: *fante*, pedes et famulus; quia scilicet olim pedites equitum famuli, vel pedissequi fuerunt.—*fante* autem a Lat. *Infans*, manifeste ortum ducit. Et nos *Boy*, non tantum pro puero sed et pro famulo, secundario sensu usurpamus."

After which he refers us to *Lansquenet.*

A Lansquenet, a Fr. G. *Lansquenet*, pedes, miles, gregarius, utr. a Teut. *Lance*, lancea, et *Knerbt*, servus: olim enim pedites equitum lancearioram quasi servi erunt; et quilibet eques quatuor vel quinque pedites, tanquam famulos circumduxit. Exercitus autem numero equitum, non peditum censebantur.

Vide *Comineum* et alies illorum seculorum Scriptores.

It appears, that Machiavelli, in his Arte della Guerra, sufficiently points out what, and how considered, the infantry were in his time, when he says (libro primo) "Venuta la pace, che i *gentil huomini* alla loro particolare arte."

It is plain, the *fanti* were huomini bassi, e soldati gregarii, *i. e.* hired *servants*, and therefore called *fanti*, and the corps *fanteria.* The term *infantry* was given to them when they were considered merely as *lads* attending on the army: and the term has continued, though their condition is altered.

From these sensible observations, it is evident that although the primary sources of infantry are in the Greek and Latin languages, its modern derivation is from the Italian word *fante*, which signifies a follower. In the first stages of modern warfare, battles were chiefly fought by cavalry or horsemen; but in Italy, and afterwards in Spain, the bodies of horse were always attended by a certain number of squires or armed men on foot, who marched in the rear and assisted their leaders.

Boccacio mentions the latter under the term *fanteria*, and other Italian writers, one of whom we have already quoted, call it *infanteria*, both being derived from *fante.* Nothing can be more out of date, out of place, and superficial than to imagine that because the Spaniards have recorded a gallant action, which was performed by an *infanta* of that nation, the rest of Europe should bury the real etymology of infantry beneath the flimsy texture of court adulation. It is, besides, extremely erroneous to state, that until that period men did not fight on foot. It is well known that the Greeks and Romans frequently placed the greatest confidence in men of that description. The former had their Hoplitai, their Psiloi, and their Peltastai; and the latter their *Celeres*, *Velites*, Hastati, Principes, and Triarii, or Pisarii. The French word *Fantassin* which signifies a foot soldier, is manifestly derived from *fante.*

Until the reign of Charles the VIIth. the French infantry were extremely defective; so much so, that Brantome says in one part of his works, the infantry could not be considered as essentially useful to the security of the state. For it consisted in those days, of *marauts, belistres mal armés, mal complexionnés; fenéans, pillards et mangeurs du peuple:* which may be thus rendered in plain English: *lads, rascals, and vagabonds, scoundrels ill equipped and ill looking · filchers, plunderers, and devourers of the people.*

Europe however is unquestionably indebted to the Swiss for a total change in the military system particularly so with regard to foot soldiers.

Dr. Robertson in the first volume of his history of Charles V. p. 105, observes that the system of employing the Swiss in the Italian wars, was the occasion introducing a total innovation in the military custom. The arms and discipline of the Swiss were different from those of other European nations. During their long and violent struggles in defence of their liberties against the house of Austria, whose armies, like those of other considerable princes, consisted chiefly of heavy-armed cavalry, the Swiss found that their poverty, and the small number of gentlemen residing in their country, at that time barren and ill cultivated, put it out of their power to bring into the field any body of horse capable of facing the enemy. Necessity compelled them to place all their confidence in infantry, and in order to render it capable of withstanding the shock of cavalry, they gave the soldiers breast-plates and helmets, as defensive armor, together with long spears, halberts, and heavy swords, as weapons of offence. They formed them into large battalions, ranged in deep and close array, so that they could present on every side a formidable front to the enemy. (See Machiavel's Art of War, b. ii. chap. ii. p. 451.) The men at arms could make no impression on the solid strength of such a body. It repulsed the Austrians in all their attempts to conquer Swisserland, It broke the Burgundian gendarmerie. which was scarcely inferior to that of France, either in number or reputation; and when first called to act in Italy, it bore down by its irresistable force, every enemy that attempted to oppose it. These repeated proofs of the decisive effect of infantry, exhibited on such conspicuous occasions, restored that service to reputation, and gradually re-established the opinion which had been long exploded, of its superior importance in the operations of war. But the glory the Swiss had acquired, having inspired them with such high ideas of their own prowess and consequence, as frequently rendered them mutinous and insolent, the princes who employed them became weary of depending on the caprice of foreign mercenaries, and began to turn their attention towards the improvement of their national infantry.

The German powers having the command of men, whom nature has endowed with that steady courage and persevering strength which form them to be soldiers, soon modelled their troops in such a manner, that they vied with the Swiss both in discipline and valor.

The French monarch, though more slowly, and with greater difficulty, accustomed the impetuous spirit of their people to subordination and discipline; and were at such pains to render their national infantry respectable, that as early as the reign of Louis XII. several gentlemen of high rank had so far abandoned their ancient ideas, as to condescend to enter into their service.

The Spaniards, whose situation made it difficult to employ any other than their national troops in the southern parts of Italy, which was the chief scene of their operations in that country, not only adopted the Swiss discipline, but improved upon it, by mingling a proper number of soldiers, armed with heavy musquets, in their battalions; and thus formed that famous body of infantry, which, during a century and a half, was the admiration and terror of all Europe. The Italian states gradually diminished the number of their cavalry, and, in imitation of their more powerful neighbors, brought the strength of their armies to consist in foot soldiers. From this period the nations of Europe have carried on war with forces more adapted to every species of service, more capable of acting in every country, and better fitted both for conquests, and for preserving them. See Robertson's View of the State of Europe, book I. pages 105 and 107.

INFANTERIE *aventuriere*, Fr. a species of French infantry, which succeeded to the legions that were established under Francis I. in imitation of the Roman legions. This infantry was kept up as late as during the reign of Henry IV. when the whole of the foot establishment was reduced into regiments.

Heavy-armed **INFANTRY**, among the ancients, were such as wore a complete suit of armor, and engaged with broad shields and long spears. They were the flower and strength of the Grecian armies, and had the highest rank of military honor.

Light-armed **INFANTRY**, amongst the ancients, were designed for skirmishes, and for fighting at a distance. Their weapons were arrows, darts, or slings.

Light **INFANTRY** have only been in use since the year 1656. They have no camp equipage to carry, and their arms and accoutrements are much lighter than the common infantry, or battalion men. Wherever there is light cavalry, there should be light infantry to act in conjunction.

Foreign **INFANTRY** (*Infanterie étrangere*, Fr.) Foreign troops were taken into pay, during the old monarchy of France, at a very early period. In the reign of Philip surnamed le Bel or the handsome, treatises and agreements were severally entered into for this purpose, with John Bailleul king of Scotland, Eric king of Norway, Albert duke of Austria, and many other German princes, and with Humbert duke of Viennois.

Philip of Valois likewise made use of foreign troops, and under Louis XI. the Swiss were taken into French pay; since that period and until the revolution, which was accomplished on the 10th of August, 1792, several regiments were maintained under the different denominations of Swiss, German, Italian, Catalonian, Scotch and Irish corps or brigades. During the present war the same system has been more or less adopted by the British government. Independent of foreign subsidies, it has been judged expedient to admit foreigners of rank, and we presume, of military merit, within those native limits, from whence heretofore every stranger was jealously excluded. A reference to the official army list will readily point out the corps that come under this description. With respect to the 60th or loyal American, it is necessary to observe, that the original principles upon which those battalions were established, have been totally altered. One battalion in particular, instead of being called American, should be named German. For the colonel is a German by birth and education, and the majority of the corps are from that country.

In thus adverting to the 60th regiment, we think it right to explain away an absurd and contradictory opinion, which has prevailed of late years to the prejudice of that gallant corps. It has been called the condemned regiment, from an idle, and unfounded notion, that the different battalions, though forming a considerable part of the British infantry, were excluded from home service, on account of some imputed misconduct. Their uniform good behaviour is a sufficient refutation to the latter supposition; and when we state that at the close of the American war, the battalions of the 60th were formed for the express purpose of garrisoning the British possessions in Canada, and as the means of providing for those Americans who had suffered by their attachment to the royal cause, we may leave the subject without further explanation; merely adding, that instead of being exiled from Europe, they have during the present war, done duty in Ireland and at the Isle of Wight. With respect to foreign troops in the pay of and actually serving in Great Britain; there are five Dutch regiments under two Dutch generals, which in every sense of the word, come under the description of foreign infantry. Indeed from the general convulsed state of Europe, and the gradual introduction of coercive measures, the business of arms seems necessarily to have taken an ascendancy over every other calling or profession.

The foreign infantry, in the service of Great Britain, according to the returns delivered in on the 1st of November 1800, consisted of loyal French emigrants, Castries, Mortemart, Roll, and Dillon; Meuron ditto; four ditto Dutch, each having a company of artillery attached, and one Dutch rifle with a company of pioneers; Lowenstien's corps, which was not completed, and one corps of foreign invalids. Staff to a foreign hospital. There were besides sixteen unattached foreign officers who received full pay, 166 ditto on half pay, 504 aged and wounded ditto, 46 foreign officers widows, 44 children of foreign officers who died in the king's service. There was also a small corps of estafettes, which were attached to the waggon train, and consisted wholly of foreigners.

The Turkish INFANTRY (*Infanterie Turque*, Fr.) is generally composed of regiments that are chosen or select. This body is first divided into two parts called *Capikuli* and *Serratkuli*. The militia, which is named *Capikuli*, is subdivided into *Janizaries*, *Agemolans*, *Topeys*, *Gebegys* and *Sakkas*. The agemolans constitute the military school, in which young men, destined for the corps of Janizaries, are educated; The *Topeys* are Turkish cannoniers, the *Gebegys* are armorers, and the *Sakkas* are water carriers.

The Serratkuli infantry is composed of *Azapes*, *Izarelys*, *Seimenys*, *Lagumgys* and *Musellims*. Count de Marsilly in his *Etat militaire* de l'Empire Ottoman, gives the following account of these corps.

The Porte being convinced, that the body of Janizaries was not sufficiently strong to garrison all the frontier places belonging to the Turkish empire, established in the different provinces new corps of infantry, whose duty was similar to that of the Janizaries, in camp and garrison. These corps were maintained at the expence of each Beglerbey or principality. Some writers have inconsiderately confounded this corps with that of the Janizaries, merely distinguishing it by the name of *Capikuli*. It differs, however, very materially from them, being superior in the formation of its divisions, more celebrated for the valor of its troops, and in every respect better disciplined.

This corps is not upon the same footing as the militia called Capikuli. It is, in general under the direction of the Bachas of the different provinces, the command of which is given to those persons who are either the particular friends of the Bachas, or have the means of bribing handsomely for the appointments. This militia does not receive any pay, unless it be actively employed, and its subsistence in that case is drawn from the provinces, much in the same manner as British militia is from the different counties, at the monthly meetings. With regard to its institution, the principal object of it is to support the Janizaries, and to replace them, when vacancies occur.

The *Serratkuli* infantry, is divided into *Azapes*, *Izarelys*, *Seimenys*, *Lagumgys*, and *Musellims*.

The number of the Azapes is not particularly fixed. They consist chiefly of independent companies, which are distributed among the different departments of the Turkish empire. They are distinguished among their own people by the different names of the week, and are divided into as many odas or companies.

These odas or companies are indiscriminately subject to the orders of two general officers, viz. the Azape-Agasi who is commander in chief of the Azapes, and the Azape-Kiatiby their commissary general, who keeps a register of their names and countries.

They obey subordinate officers called *derys*, oda-baschys, and bairactars. There are ten derys attached to each company, who may be properly considered as corporals, entrusted with the discipline of the soldiers. The bairactars are the standard-bearers. Each standard belonging to an oda or company consists of a horse's tail, which hangs from the end of a lance, that is capped with a gilt ball. The officers are moreover directed to superintend the messes belonging to their different companies.

It is usual for each azape to be a native of the province, in which he serves, and he is generally clothed after the fashion of the country. At Buda the azapes were ordered to be dressed in the Hungarian manner, which consisted in a cloth cap bordered with skin, a sabre, an arquebus or fusil: which similarity of dress and accoutrement has frequently confounded the azapes with Hungarian christians.

The isarelys are chiefly employed in the frontier towns, and have charge of the artillery in the room of the topeys or cannoniers. They are under the direction and command of an artillery officer, who is sent from Constantinople and is called *Topey-Agasi*.

Their number is uncertain, and they are not subdivided, as their employment depends wholly upon the quality and quantity of artillery that are used. One man is attached to small field pieces, and two to those of larger calibre; so that instead of being distributed by companies, they are ordered upon duty according to the nature and number of the ordnance.

They have no other officer, besides the one already mentioned, attached to them, which officer is subordinate to the Bacha of the province; as their service does not require subaltern officers. The Bolukys-Baschys are officers merely employed to bring orders from the general officers, but they cannot interfere in the direction or management of the artillery.

The *Seimenys* are the least respected body belonging to this national militia, being composed wholly of peasants, that are called out and enrolled like the supplementary militia of Great Britian, in cases of extreme necessity. They are only in fact considered as a mass of people serving to increase the number of troops, without having any credit for military skill or valor. They consist of Turks, Greeks, and even of Roman Catholics, who enrol themselves in order to be exempted from the annual tax.

Their only chief or commanding officer, is the bacha of the province. The seimenys belonging to Natolia are all Mahumedans. They are called *Jajas*, or *men on foot*, and although they do not receive any pay, except when embodied, they are nevertheless divided into *Bairacts* or standards, which are similar to the *Odas*, and they obey their Seimeny-Boluk-Beschy, who commands sixty men that are attached to his standard, and to the Bairactar, who escorts the standard, which is generally red and of a moderate size.

The seimenys usually do duty in camp and garrison. For although the Turks place little confidence in christians, yet there have been instances wherein their services have been required on very important occasions. At the siege of Vienna they employed christian troops, and increased their infantry by those means very considerably; they even formed a reserve from troops of that description; and their conduct was such, that they acquired a marked reputation by the obstinate resistance which they made at Colemberg.

These troops, however, are in general ill-armed; having only rough polished sabres, and very indifferent arquebusses with locks, or bad fusils of different sizes, and consequently of little use in the hands of such men.

The *Lagumgys* are what we call miners: This body is chiefly composed of Armenians and christians, out of Greece or Bosnia, who being in the habit of mining, are extremely serviceable in that line, and act under the immediate direction of some old officers called lagumgys-baschys or chiefs of the miners. Some particular privileges are annexed to these appointments.

The *Musellims* are christian tributaries, whose duty is to march before the advanced guard of the army, to clear the roads and to construct bridges for the passage of the troops. On this account they are called pioneers.

The bachas of the different Turkish towns pay great attention to these musellims or pioneers. They not only exempt them from all taxes, but even give them lands and freeholds. By a particular privilege which is attached to this corps, only five out of thirty are obliged to do duty on a march, and they are then joined to the carpenters, which renders the service less fatiguing. Their number is not fixed. It depends indeed, more or less, upon the population of the different provinces, and on the extent of land which may be disposed of in their favor.

They are commanded by a bas-musellim or principal person belonging to the exempts, whose only duty is to superintend the regular discharge of their functions.

Those, however, belonging to Natolia are subject to the bey or sangiah, who superintends the distribution of their subsistence, &c. in the same manner that he does that of the cavalry which is attached to his department.

The only weapon they carry is a hatchet; but the neighboring villages or the public magazines belonging to the artillery, are obliged to supply them with pickaxes and other tools that may be wanted in their profession. They are strictly forbidden the use of a sabre or fusil.

Whenever the Turkish army is on its march, the musellims are obliged to go forward every preceding day, in order to prepare the way for its progress.

During a siege they are frequently attached to the garrison guns, which they work in the best manner they can; and when a town is besieged by the Turks, the musellims are employed in the trenches, from which duty they derive considerable profit; so much so, that the Janizaries are extremely jealous of them on these occasions. They are, in a word, the most formidable body of infantry which the Turks possess; for the groundwork of every species of attack or defence, and the management of all warlike machines rest upon their exertions.

The INFERNAL. Strada gives a very curious and interesting account of this machine, in his history of the Belgic war.

The infernal was tried by the English at Dunkirk and St. Maloes, and by the Dutch and English under king William. It is likewise mentioned by Grose in his history of the English army.

The only time during the present war at which its dreadful powers have been attempted, was in the month of December, 1800, when a conspiracy was formed and emissaries under the direction of one *Jackson*, sent from London to destroy Bonaparte. It failed as to its immediate objects, but proved by its collateral effects, that the invention is as destructive as the most sanguine destroyer of the human race could wish.

To INFEST, *infester*, Fr. This word is more strictly applicable to places than to things.

To Infest *a place (infester un lieu)* signifies to frequent any particular spot for the evident purpose of doing damage, to create uneasiness and to commit depredations. Thus free-booters or thieves are said to infest places.

INFINIMENT PETIT, *Fr.* Infinitely small. Modern calculators call, by this name, every thing which is so exiguous that it cannot be compared to any other quantity, or which is smaller than any other assignable quantity. The new calculation which has been adopted among geometricians respecting quantities that are infinitely small; is called the calculation of *infinitesimals*.

INFIRMARY. See Hospital.

INFLUENCE *of example*. In a military sense the influence of example is of the greatest consequence. We have already spoken generally on the necessity of good example (see Example); we think it proper further to observe, that the influence which every action of a commanding officer bears, is of so much importance to the service, as to render it incumbent upon every superior person to consider its effects upon the mind and conduct of an inferior. A circumstance once occurred, which is frequently quoted. It was briefly this: an officer happening to appear upon the parade without being strictly uniform as to dress, was ordered to fall out. Some little time after the commanding officer (by whom the subaltern had been noticed) was himself irregularly dressed; the latter availed himself of an opportunity to mention the circumstance in a familiar and good-humored manner; upon which the former very shrewdly replied—*It is true, sir, that I am not strictly in uniform to-day, but you will be pleased to recollect, that I have the commanding officer's leave.* The repartee was not amiss, as it conveyed at the same time a sound piece of advice to every inferior officer; but it did not justify the deviation. An admiral, from motives, we conceive, of duty, as well as principles of economy, was so tenacious of regularity, that rather than appear not strictly correct, he has been known to have a second naval uniform, made of coarse flannel, which he constantly wore on board. Notwithstanding this laudable instance, it is well known, that both in the army and navy, the repartee of the commanding officer has been frequently used.

INFORMERS. Soldiers who give information of false musters, or of pay illegally detained, are entitled to their discharge. See Mutiny Act, sections 27 and 69.

INGINEER. See Engineer.

INGENIEUR, *Fr.* Ingineer. See Engineer.

Ingenieur *par rapport à l'architecture civile*, Fr. An engineer who may be properly called an adept in civil architecture. A person of this description was always employed among the French. He was a skilful and intelligent man, perfectly master of mechanics; by which means he could invent machines for the purpose of increasing propellents, so as either to draw or to raise heavy loads with facility, or to elevate and direct the course of waters.

Ingenieur *en architecture militaire*, Fr. An engineer who is perfectly master of military architecture. The term itself points out, that the requisite qualifications are ingenuity, skill, and an apt talent at invention. The French, in former times, made use of the word *ingeigneur* instead of *ingenieur*; deriving the former from *engin*, which originally signified a machine amongst them, and has since been adopted by us. All warlike machines, such as cannons, &c. were, in fact, called engines, because they were, for the most part, invented by engineers. So that even the word *engin*, Fr. and *engine* comes from the Latin *engenium*, or invention. These machines were, indeed, frequently called in bad Latin *ingenia*. Hence the etymology of *ingenieur*. The situation of *ingenieur*, among the French, has always been deemed extremely honorable. They have always risen to the highest posts in the army, and their skill and judgment have always been thought indispensibly necessary in all the operations of war. We have already pointed out, under the article Engineer, the outlines of this important character. We only regret, that the limits of our undertaking will not admit the very sensible observations which are to be found under the head Ingenieur in several French publications.

The French, and after them several other nations, have formed their engineers into select corps; the French call them *corps de Genie*.

Ingenieur *Directeure*, Fr. A responsible person in the old French service, whose duty was to superintend and take charge of a certain number of fortified towns or places, and to transmit a regular account of the actual state of the works, and to represent whatever might appear defective, or stand in need of repair.

Ingenieur *en Chef*, Fr. chief engineer. It was the business of this officer to superintend the construction of all sorts of military works, having several subordinate engineers under him to assist and put his plans into execution. In order to make some distinction between the man of skill and genius, and the mere pretenders to knowlege in this great branch of military acquirements, it was usual, during the monarchy of France, to call all engineers that were acknowleged by government, *ingenieurs ordinaires du roi*, engineers in ordinary to the king.

The usual pay of the French engineers was, from *vingt ecus* or two pounds ten shillings up to one hundred *ecus* or 4*l.* 10*s.* English, per month, according to each individual's length of service, peculiar talents, or appointment. Persons were received as engineers by the superintendant of the board of ordnance, after having passed a mathematical examination; and the situation was the more eagerly sought after, inasmuch as it led to the highest military post; as that of marshal of France, to which the celebrated Vauban was promoted.

In 1755, the French engineers were formed into one corps, under the name of the royal corps of artillery and engineers; the principal officers of which communicated with the secretary of war, and received through him the king's orders.

No country has ever paid so much attention to the art of engineering, as France has under all her vicissitudes; and this has arisen not so much from a natural predeliction to that peculiar study, as from a conviction of its utility in all warlike operations, but most especially in sieges. This class of military men was, however, extremely neglected, until the reign of Louis the XIVth. Few ever saw, or were present at above five or six sieges; being either wounded at the beginning, or during the operations of a siege. They seldom indeed, witnessed the termination of it; and from the want of engineers, the investment of a town or fortified place became tedious, and many lives were unnecessarily lost. Louis the XIVth, by his personal appearance and attention gave fresh life to his army, and instilled into every part of it a spirit of subordination, which had been hitherto unknown. He was actuated by a thorough conviction, that in every species of offensive and defensive operation the use of artillery, under the guidance of scientific men, was essentially requisite. In no instance however, does the skill of an able engineer appear so much to advantage as in the attack of a fortified place. This the king witnessed himself, and on that account he considerably increased the number of engineers. Persons of the first distinction became candidates for situations in that honorable body.

Whenever there was a deficiency during a siege of subordinate engineers or *ingénieurs en second*, it was usual among the French to select lieutenants or sub-lieutenants from the different infantry corps to superintend the works, and to see that the workmen did their duty. They received an additional pay of ten ecus, or one pound five shillings per month, in consideration of this extra service, and their being selected in this manner was a sure step to the rank and emoluments of an engineer. It has been very justly observed by a French writer, that every infantry officer should be acquainted with field fortification at least; for a thousand instances occur, in which the immediate assistance of an engineer is required, and to which in actual service, it is impossible for the regularly bred officer of that establishment to pay personal attention. We allude among other cases, to the temporary defence of out-posts, to the laying and springing of fougasses, &c.

Before the revolution, the frontier towns and other fortified places belonging to France were under the direction of 350 engineers, called *ingénieurs du roi*, who were subordinate to one director general.

All instructions relative to the fortifications passed through the latter officer to the king.

All engineers were subject to the orders that the commissary general thought proper to issue, with respect to the attack or defence of places, the construction of works, &c. and they were further directed to see, that all the necessary implements for a siege were duly provided. They gave in a weekly report to the director general of the progress and state of the works, and had authority to draw upon the treasury for whatever sums were wanted to pay the contractors. Every engineer was particularly enjoined to see that the contractors furnished good materials.

INGLEZ, *Ind.* The English are so called by the natives of Bengal: they are frequently called Feringhees, that is strangers, *Wullaget*, which signifies to the country. Americans are called *Nia-Feringhees*, or new strangers, or foreigners.

INHIBITION. See Embargo.

INN-HOLDERS. In England, persons who have a licence to enable them to sell spirituous liquors, beer, &c. and who are obliged by the conditions specified in that license, to provide victuals and beer for military men, under certain restrictions. See 39th and 40th Geo. III. Cap. 27. Art. XLI XLII. XLIII.

INIMICAL, hostile.

INLISTING, the act of engaging soldiers, to serve either in the cavalry, infantry, or artillery, For the regulations respecting the inlisting soldiers, see Recruiting.

INNONDER, *Fr.* See Inundate.

INQUIRY. See Courts *of*

INROAD, incursion, sudden and desultory invasion.

INSCONSED, in the military art. When any part of an army has fortified itself with a sconce, or small work, in order to defend some pass, &c. it is said to be insconsed.

INSIDE *guard*, a guard with the broad sword, to secure the face and front of the body, from a cut made at the inside of the position above the wrist. See Broadsword.

INSPECTEUR, *Fr.* Inspector. Military inspectors were originally instituted among the French, after the peace of Aix la Chapelle in 1668. Two persons at that epoch occupied this important situation; one being called inspector general of cavalry, and the other inspector general of infantry. Louis XIV. under whom France assumed over the rest of Europe a preponderance of military character, increased the number of inspectors, and ordered them to be distributed in the different departments for the purpose of reviewing the troops every month, and of transmitting to him a regular statement of their effective force, &c.

It was the duty of these inspectors to examine minutely at the commencement of every month the state of each regiment, to look at the books belonging to the several companies, and to mark out such men as did not appear fit for the service. Each inspector had a separate dwelling-house allotted to him in the garrison town of his department, and he had the power, on giving previous notice to the governor, of ordering the men under arms. A brigade major delivered to him every evening the orders of the day.

Inspectors general of this description ranked with the army, without bearing any direct commission, and in time of war, they were acknowleged as general officers, brigadiers, or colonels.

Their inspection did not extend to the troops of the household, the French, or Swiss guards, nor to the regiment *du Roi Infanterie.* The artillery were also out of their superintendance.

Previous to the French revolution, there were eleven inspectors of infantry, and eleven of cavalry attached to the French army. There was likewise one inspector general of infantry, and one inspector general of cavalry.

Inspecteur *de construction*, Fr. an officer in the French army, in whose presence all plans and profiles for fortification, &c. were drawn, before any work could be undertaken. An accurate estimate was made of the wood which would be required to complete it. It was likewise a part of his duty to point out to the carpenters the precise method by which ground, plans, and elevations, forts, batteries, and bridges, &c. were to be conducted. It was his business, in a word, to attend to the construction and repair of every part of a fortification.

INSPECTING *officer of a district*, a responsible character, selected from the line, who is nominated by the war-office, to superintend the troops, stations, and recruiting parties, within the limits of his station.

Field officers of districts may order detachment courts-martial, to be composed of the recruiting officers in their districts, in the usual number and ranks, and they may approve of every such court martial, and to direct the punishment awarded thereby to be executed, mitigated or remitted, as they shall think expedient. They are to receive orders from the adjutant general respecting the nature of their returns; and all returns and reports are to come to the inspector general through them. Each district field officer in the British service has an allowance of ten shillings a day, in addition to the full pay of his respective regimental rank, and he is to be reimoursed for the actual expence he incurs for stationary and postage of letters; which charge must be accompanied by a certificate upon honor.

Each district field officer is allowed to appoint a subaltern officer (not employed upon the recruiting service) to act as adjutant in the district. The pay or allowance of such subaltern is three shillings a day in addition to his full regimental pay; he is also authorised to nominate two serjeants, with the additional pay of sixpence each, one to act as serjeant major, and the other as clerk to the district.

Each field officer may moreover give directions to the hospital mate, who is placed under his orders, to examine the recruits when brought for inspection, and to give such medical assistance as may be in his power, to the several recruiting parties in the district he belongs to.

When colonels of regiments take upon themselves the whole direction of the recruiting service for their own corps, they must conform to the regulations which require returns to be made to the inspector general of the recruiting service; and they must instruct their officers to send weekly returns to the regulating field officer, in whose district they are stationed, of all the casualties that have occurred.

INSPECTION, a strict examination,

a close survey. It likewise signifies superintendance. In a militaty sense it admits of both interpretations, and may be considered under two specific heads, each of which branches out into a variety of general, regimental, and company duties.

A general INSPECTION is made annually by the reviewing generals of districts. Every regiment, on this occasion, is minutely looked into, and a faithful account must be delivered by each commanding officer of the actual state of his regiment, together with all the casualties that have occured during the current year. The interior economy of the corps is not only investigated to the bottom, but the discipline of the men is likewise examined. For a more particular explanation of the latter, see REVIEW.

Regimental INSPECTION is made once a month by the commanding officer. The clothing, the necessaries, arms, and accoutrements belonging to the different companies are examined by the lieutenant colonel or major of the corps. Specific returns are made by the officers commanding troops or companies, by whom the debts and credits of the men, which have been made up and accounted for on the 24th day in each month, in infantry regiments, and on the 24th day in each second month in cavalry corps, are exhibited for examination at head quarters. This forms the groundwork or basis of the general inspection, at which the troop or company book should always be produced.

Private INSPECTION *of companies* is the first step towards the other two, and ought to be made every Monday morning, by each officer commanding a troop or company, or by his subaltern.

INSPECTION *of necessaries* is an examination of the different articles which every soldier is directed to have in good repair. The regular or established proportion of necessaries that each soldier of cavalry and infantry is to be in possession of on the 24th day of each month, to entitle him to receive the balance that may be then due to him, consists of the following articles.

Cavalry.—3 shirts, 2 pair of shoes, 3 pair of stockings, one pair of gaiters, 1 forage cap, 1 saddle-bag, one pair of canvas, or woollen over-hose, 1 canvas, or woollen frock or jacket, 1 stock, 1 black-ball, 2 brushes, 1 curry-comb and brush, 1 mane comb and spunge, 1 horse-pricker.

Infantry.—3 shirts, 2 pair of shoes, 2 pair of stockings, or 2 pair of socks, 1 pair of gaiters, 1 forage cap, 1 pack, 1 stock, 1 black-ball, 2 brushes.

Private INSPECTION *of arms.* Twenty minutes or more before the general parade, every troop or company should be drawn up on its troop or private parade, and each man be narrowly inspected by an officer. When the dress and accoutrements have been looked at, the troop or company standing at open ranks, and with shouldered arms will receive the following words of command from the senior officer.

Open-pans—slope, or *port arms*—The pans and locks will be narrowly inspected. *Carry arms—shut pans—order arms—draw ramrods*—at which word the men draw and put them in the pieces, springing them successively as the officer comes up to them, but not returning them until the whole troop or company has been examined. The officer will carefully examine the nob of each ramrod, and determine from its appearance whether the inside of the barrel be clean. On some particular occasions, especially when a party is ordered upon immediate duty with ball cartridges, a more minute examination of the musquet should take place. The pricker is not always sufficient to ascertain the state of the interior part of the touch-hole, as it can only enter in one direction; it is therefore recommended to order the men *Buts to the front*, after which they are to blow down the barrels. By applying his hand to the touch-hole, the officer will be able to know the real state of the vent. When the arms have been examined, the men will be ordered to *handle arms—fix bayonets.*—When the bayonets and slings will be inspected—*unfix bayonets—ease arms—stand at ease.*

INSPECTOR *of cavalry*, an officer whose particular duty is to inspect all cavalry regiments, to report the state of the horses, and to receive specific accounts from the different corps of their actual state; he communicates with the commander in chief, and whenever a cavalry regiment is ordered to be disbanded, it must be looked at by the inspector general, before it is finally broken.

INSPECTOR *of the recruiting service*, an officer of rank through whom the field officers of districts, and colonels of regiments (when they personally manage the recruiting service of their own corps) transmit their several returns to the adjutant general's office.

INSPECTOR *of clothing*. These inspectors, or the inspectors for the time being, are directed to view and compare with the sealed patterns, the clothing of the several regiments, as soon as the same shall have been prepared, and if the said clothing appear to be conformable to the sealed patterns, they are authorized to grant two certificates of their view and approval thereof; one of which certificates is to be delivered to the clothier, to be sent with the clothing to the head quarters of the corps, and the other to be lodged with the general clothing board, as the necessary voucher for passing the assignment of the allowance for the said clothing.

All clothing must be viewed, and certificates be signed by *both* inspectors, except in cases where the absence of one of them shall be unavoidable; in all which cases the cause of such absence is to be stated by the other inspector, in his certificate of the view of the clothing.

Inspectors of clothing are to follow all instructions which may be transmitted to them from the commander in chief, or the secretary at war.

INSPECTOR *of hospitals*, the next on the staff to the surgeon general.

INSTALLATION, the act of investing any one with a military order.

INSTRUCTION *des procès criminel*, Fr. A military form or process in criminal matters. In the old French service when troops were in garrison, it was the duty of the town-major to issue out the regular form of proceeding against all officers, serjeants, and soldiers who were accused of crimes or misdemeanors. The majors of corps exercised this function when troops were encamped. There was a specific form, subject only to a few alterations with respect to terms and expressions, by which all sorts of military crimes were investigated. Desertion was the chief and most prevalent crime among French soldiers. It became the peculiar business of the major, whether in garrison or in the field, to explain and bring forward every thing that might establish the truth of the accusation; and he acted on this occasion, as an attorney general does in civil matters; only with this difference, that the latter explained the grounds of his indictment before a judge, whereas the former not only exposed the nature of the case, but drew his own conclusions, and bounded his verdict.

Those officers who may be disposed to enter more largely into the subject of French military process, as conducted before the revolution, may be satisfied by perusing *Le Code Militaire, ou deuxieme volume du service de l'Infanterie*, page 123; and we refer all British officers in general to M. Tytler's late publication on English military law.

Major Macomb of the United States engineers has published a very judicious and concise tract adapted to the military service of the Union; and it is adopted by the war office.

Military INSTRUMENTS (*instrumens militaires.*) Fr. By the sound of military instruments the troops belonging to the several armies in Europe, &c. are directed in their various movements.

The instruments which are peculiar to the cavalry of most nations are the trumpet and the cymbal. In France, dragoon regiments in general formerly adopted the drum in common with the infantry, they now use the trumpet for garrison, and the bugle for the field service. A certain number of fifers are likewise allowed in foot regiments. Hautboys and clarinets do not form any part of the music which is sanctioned and paid for by the public. Colonels of corps, however, frequently entertain a band either at their own expence, or out of what is called the stock-purse.

The principal military instruments which were used among the ancients, whether for cavalry or infantry, consisted of the trumpet, the cornet, and the buccina or French horn.

Warlike INSTRUMENTS *used by the Turks*. The Turks make use of wind and clashing instruments of different shapes and sizes; all, except one wind instrument, are better calculated for pomp and ceremony, than adapted to military service.

The clashing instruments, which the French call *instrumens à choc*, consist of two sorts of drums, and an instrument which is made of two plates of metal, such as the cymbals we have adopted from the Asiatics.

Their wind-instruments consist of a winding or crooked trumpet, and of a wooden fife.

The big drum which they call *daul*, stands three feet high. It is carried by a mounted drummer, who makes use of a thick stick with which he strikes the upper part, and a small one, with which he plays upon the under one; these he applies alternately with much ingenuity of hand, and great gravity of countenance. This is the only instrument which the Turks use in military exercises or manœuvres. The big drums are constantly beat when the enemy is near, and round all the out-posts, in order to keep the sentinels upon the alert. On these occasions the drummers exclaim with a loud voice: *Jegda Allah*! that is, God is good! or as the French interpret it—*Dieu Bon*.

The two small drums, or the kettle drums serve as marks of distinction for the bacha's family, and likewise as signals when the troops are to march. They contribute greatly to the general harmony of a concert. The Turkish name for them is *Sudar Nagara*. The bachas, or bashaws with three tails are entitled to three kettle drums, which are fixed on each side of the saddle, and are beat in the same manner that those in other services are.

There is likewise another sort of Turkish instrument called *zill*, which consists of two hollow brass plates, on whose convex side is fixed a ring sufficiently large to contain the grasp of three fingers. By clashing them seasonably together, an agreeable silvery sound is extracted. The bashaws with three tails are each intitled to two sets of these instruments.

There are two sorts of wind-instruments used among the Turks, they differ very much both with regard to the manner in which they are played, and to the materials with which they are made. The first is the trumpet, which is made of the same metal that ours are, but are somewhat longer; they are called *bori*. The man who blows this trumpet is always mounted on horse back, and every bashaw with three tails is intitled to have seven.

The second instrument is made of wood; it is a sort of pipe or flute with five holes; the Turks call it *zurnader*. The person who plays this instrument is on horseback, and every bashaw with three tails is intitled to five.

The sounds which issue from these different instruments would be extremely harsh to the ear, were they not in some degree harmonized by the great drum: when the whole is played together, the effect is both martial and pleasant.

Surgical INSTRUMENTS *directed to be provided for the use of regimental hospitals.* An amputating saw, with spare blade, 1 metacarpal saw, with ditto, 24 curved needles, 2 amputating knives, 1 catlin, 2 tenaculems, 1 bullet forceps, 1 pair of bone nippers, 2 screw tourniquets, 4 field tourniquets with handle, 2 callico compresses, 2 trephines, with sliding keys, 1 trephine forceps, 1 elevator, 1 lanticular, a brush, key instruments for teeth, to fit trephine handle, 8 scalpels, 2 silver catheters, 1 trocar with spring and introductory canula, 1 do. do. and canula for hydrocele, probang, 1 long silver probe, 1 large bougie.

Surgical INSTRUMENTS *directed to be provided for the field.* An amputating saw, 1 metacarpal saw, 12 curved needles, 1 amputating knife, 1 catlin, 1 screw tourniquet, 1 silver catheter, 1 elastic ditto, 2 trephines to fit one handle, 1 trephine forceps, 1 elevator, 2 scalpels, 1 bullet forceps, 1 trocar with spring and introductory canula, 1 trocar with spring canula for hydrocele, a brush, a tenaculem, thread for ligatures.

To **INSULT**, in a military signification, is to attack boldly and in open day, without going through the slow operations of opening trenches, working by mines and saps, or having any recourse to those usual forms of war, by advancing gradually towards the object in view. An enemy is said to insult a coast when he suddenly appears upon it, and debarks with an immediate purpose to attack. The British forces under the command of sir Ralph Abercrombie, insulted the Dutch coast when they took possession of the Helder, in consequence of a bold descent. The British fleet which entered the Chesapeake bay, and on the 22 June, 1807, attacked the United States frigate Chesapeake, insulted the nation; they had the baseness to deny it, and to make an apology afterwards; but they did not punish their officers; and afterwards fled from the engagements made by their ambassador to the U. S. In attacking fortified places it is usual to insult the counterscarp, in order to avoid the destruction which would naturally follow, if the besieged had time enough allowed them to give effect to the different mines that must necessarily have been prepared beneath it. The grenadiers are always employed on these occasions, accompanied by workmen and artificers to secure the post, after it has been taken by assault.

INSULTER, *Fr.* See To INSULT.

INSURGENTS. All vassals in Hungary when assembled together in consequence of the general proclamation by Ban and Arriere Ban are so called. This, however, does not happen except in cases of great emergency, when they are headed by the prince Palatine of Hungary, and march to the defence of their frontiers. The Hungarians have sometimes indeed gone beyond them, in order to support their sovereign's right, and have acted offensively in the neighboring countries.

INSURGENTS is a term used to signify persons who have made inroads into a country; or who rise in revolt against the established laws.

INTELLIGENCE, in a military sense may be variously applied, and of course has different significations. No general can be said to be in any degree qualified for the important situation which he holds, unless, like an able minister of state, he be constantly prepared with the requisite means to obtain the best intelligence respecting the movements and the designs of the enemy he is to oppose. On the other hand, it is not possible to conceive a greater crime than that of affording intelligence to an enemy, and thereby bringing about the overthrow and destruction of a whole army. A French military writer, (to whose work we have the satisfaction of being frequently indebted for much general and useful knowlege) makes the following observations respecting the latter species of intelligence, which he classes under two specific heads.

He justly remarks, that to hold correspondence, or to be in intelligence with an enemy, (*être d'intelligence avec l'Ennemi*) is to betray your country. Armies and fortified places are almost always surprized and taken by means of a secret intelligence, which the enemy keeps up with domestic traitors, acting in conjunction with commissioned spies and delegated hirelings. Arnold had nearly effected the destruction of the American army by the intelligence which he kept up through the British major André, with the British.

A garrison town may be taken by surprize, under the influence of secret intelligence, in two different ways. The one is when the assailant to whom the place has been surrendered, is not bound to join his forces to those troops by whom he has been admitted; the other when it is necessary, that an assault should be made by openly storming, by throwing shells and petards, or by stratagem.

The first species of intelligence may be held with a governor who has influence enough to direct the will and actions of the garrison; with a garrison which is indisposed towards the governor and the officers that command the troops; with the inhabitants who have undertaken to defend a place where no garrison is stationed, and lastly with the prevailing faction, where there are two parties that govern in a free town.

The other species of intelligence may be practised with a governor who either wants power, or is afraid to tamper with the fidelity of the garrison; with some particular officer, serjeants, or soldiers; with the body of inhabitants who think differently from the armed force that overawes them, or with active and shrewd individuals, who have access to the ruling party, and can skilfully combine *affected* loyalty with *secret* disaffection.

There is not, however, in human nature perhaps a more insidious, or a more dangerous ground to tread on than that of secret intelligence; nor are the faculties of the mind ever so much put to the test, as when it is necessary to listen to the report of an individual, who whilst he is betraying one side, may be equally disposed to dupe the other. A wise general will consequently hear every thing, and say nothing; and a wise man, let his secret wishes be what they may, will warily consider, whether the person who insinuates to him even the possibilities of a plot, does not at that instant endeavor to get into his confidence, for the sole purpose of acting contrary to his supposed views, and of betraying the man who has unfolded other schemes. It is certainly justifiable policy, either in the governor of a town or in a general, to affect to give into the views of any man or party of men whom he has cause to suspect, and whose ultimate object he is determined to defeat. But he should be equally cautious, how he listens to the communications of spies or informers. The veil of honesty is often assumed to cover a deep-laid scheme of villainy; and apparent candor is the surest path to unguarded confidence. When villains voluntarily unfold themselves in such a manner as to convince an able and penetrating officer, that their treachery can be depended upon, much blood may be spared by making a proper use of their intelligence. This axiom has prevailed in every civilized country; and should be well attended to by thinking men. For when a battle has been gained, it avails little to ask, whether the enemy owed his success to force or treachery? No treachery, however, is admissible, or should be sanctioned by belligerent powers, which militates against those laws of nations which are founded upon the wise basis of humanity. *Private assassinations, the use of poison*, or *the disregard of paroles of honor*, must be generally reprobated: and whatever general obtains his ends by any of these dark means, his name should be stamped with infamy, and himself exposed to all the melancholy casualties of retaliation.

INTENDANT *d'Armée*, Fr. under the old government of France, the intendants d'armées or superintendants of the army, were principal inspectors of all sorts of stores, &c. that were necessary for the troops. The French general officers and governors of fortified towns, held continual intercourse with the intendants or supervisors who directed every branch of the commissariat.

When the intendant d'armée was not likewise intendant de province, he was directed to accompany the troops, to visit their line of encampment or cantonment, and to require of all the subordinate *intendants*, the regular proportion of stores and provisions, and to see that they were supplied according to contract, and with punctuality.

INTERIOUR *Flanking Angle*, is formed by the curtain and line of defence.

Interiour *Radius*, the part of an *oblique radius* extending from the centre of the polygon to the centre of the bastion,

Interiour *Side*. The line of the curtain, produced to the two oblique radii of the front; or a line drawn from the centre of one bastion to that of the next.

Interiour *Slope*. See Talus.

INTERMEDIATE (*intermediare*, Fr.) any thing that is, or lies between See *Intermediate* Posts.

INTERSECTION, the point where two lines cross each other.

INTERVAL, (*Intervalle*, Fr.) any space between. A word variously applied in military dispositions and manœuvres, to denote any given distance or space.

Interval *between two battalions*. The space which separates them when they are drawn up for action, or when they are encamped. This space is generally wide enough to admit the march of another battalion, that is to say, it is equal to the extent of its front when in line. When troops are encamped for the purpose of investing a town or fortified place, the interval is much greater, and seldom or ever less.

Interval *between the line and the camp*. This comprehends the space which lies between the camp and the line of entrenchments. It is generally from one hundred and eighty to two hundred toises in breadth; so that the different battalions and squadrons which are necessary for the security of the camp may have room to move in, while sufficient ground is left in the rear for troops to pass and repass as occasion may require. The same observation holds good with respect to contravallation.

INTERVALLE *du Camp à la ligne*, Fr. See Interval between the line and the camp.

To INTRENCH, to secure against the attack of an enemy, by digging a ditch or trench.

To Intrench *upon*. To invade, to make incroachments upon the property or territories of another.

INTRENCHMENT, any work that fortifies a post against the attack of an enemy. The word is generally used to denote a ditch or trench with a parapet

Intrenchments are sometimes made of fascines, with earth thrown over them, of gabions, hogsheads, or bags filled with earth, to cover the men from the enemy's fire. See RETRENCHMENT.

INTREPIDITE, *Fr.* See INTREPIDITY.

INTREPIDITY. An unqualified contempt of death, and indifference to fortune, as far as it regards personal safety; a fearlessness of heart and a daring enterprize of mind. According to Rochefoucault, intrepidity, especially with regard to military daring, implies *firmness* of character, great *confidence* of mind, and extraordinary *strength* of soul. Buoyed up and supported by these qualities, (which are sometimes natural and sometimes acquired,) men become superior to every emotion of alarm, and are insensible of those perturbations of the heart which the prospect of imminent danger almost always engenders. Chevalier Folard defines it to be a settled *contempt* of death, a species of courage which so intoxicates the mind as to make it leap over the sober bounds of judgment and discretion; an enthusiastic impulse which urges us forward and renders danger imperceptible, or, if discovered, raises our sensations beyond the least impression of fear.

A general may be said to act with *intrepidity*, when with forces inferior to those of his enemy, and under all the disadvantages of ground, &c. he hazards a general action, attacks his whole front, and finally defeats him. This hardiness and enterprize of character not only surprize your enemy, but likewise create emotions of wonder. If, on the contrary, a general at the head of a small army should be known to act against another that is superior to him in every point, except that of talent and military skill, and if by means of these qualities, the former should by able manœuvres and well concerted measures, render all the designs and attempts of the latter fruitless and abortive (at a time and under circumstances, which might dishearten almost any other general,) it is then fair to conclude, that the conduct of such a general is the consequence of great military knowlege; but it cannot, with propriety be said to be the result of *intrepidity*: for it must be evident, that before any very dangerous step has been taken, most of the obstacles have been previously removed or rendered practicable.

An officer, who is not under the influence of that species of *intrepidity* which we have described, when he has once got upon equal ground, or finds it necessary to risk an action, will, without hesitation, advance against his enemy, depending wholly upon military skill and the superior disposition of his line of battle. Full of resources and with great presence of mind, he will march forward and obtain a victory, not by dint of courage or by the mere favor of fortune, but through judgment, military ingenuity, and great tactical knowlege. And yet it would be an injustice done to the character of such an officer, were it imagined, that he could act in this manner without possessing great intrepidity. We are rather of opinion that such a man must have the most undaunted courage, with the additional advantage of consummate prudence founded upon military knowlege. The intrepidity of his soul is calmed by the cooler judgment of his head; he is aware of difficulties, but is not disheartened by their appearance; he is, on the contrary, encouraged to surmount them by that self-possession, and by that unshaken presence of mind, which enable him to execute what might seem impracticable to others.

Mere *intrepidity* is of a lively, impetuous nature, restless and impatient of restraint, which, though it may not degenerate into downright animal brutality, is nevertheless very far from being strictly rational or enlightened. If the person who acts under its immediate influence be quick in his perceptions, his conduct is generally marked by some imprudent measure, some enterprize that bids defiance to reflexion, and by some attempt that is as hastily executed as it has been inconsiderately planned. An *intrepidity* of this species is seldom found in the first class of military character: sometimes indeed, but rarely, it has been accompanied by great prudence and foresight.

In this number may be considered some ancient and modern heroes, such as Alexander the great, Charles king of Sweden, Henry IV. of France, Wolfe at Quebec, Bonaparte and Augereau at Lodi; Dessaix, Marmont, and Lannes, at Marengo; Murat at Eylau; Davoust at Austerlitz; Soult at Jena; Claperede on the Danube, in 1809; if instances be found in their histories where prudence and discretion have been overleaped by an *intrepidity* of soul that was too actively disposed on certain occasions, the effect was temporary, and easy to be traced to a cause which was too powerfully engrafted upon their nature, to be always subject to control.

INVALID properly includes every soldier that has been wounded, or has suffered materially in his health, and in consequence of his good conduct, has been recommended to a certain provision for life. Chelsea hospital is the place allotted for the reception of such objects of public gratitude and benevolence in England. Before the building of the hotel des invalides at Paris, all soldiers of the above description who belonged to the French army, wery distributed among the frontier towns, and enjoyed a certain allowance for life.

In England, and, we presume, the custom still exists under the new order of things in France, those invalid soldiers who are reported not wholly incapable of bearing arms, are occasionally sent into garrisoned places, and do duty with the regular army.

It is a reproach to the United States that there is yet no provision for the maintenance of those who serve the best part of their lives in its military establishment.

INVALIDE, *Fr.* See INVALID.

INVASION, in war, the entrance or attack of an enemy on the dominions of another.

INVENTAIRE *des Effets des Officiers décedés*, Fr. Inventory of the effects of deceased officers. As the French regulations on this head were more specific than those expressed in our articles of war, we shall premise the extract from the latter, by the following particulars which were in force during the old government of France.

When governors, commandants of places, staff officers, commissaries of war, engineers and officers entrusted with the care of artillery, died in their several provinces or allotted quarters, the judges or magistrates belonging to the spot where such deaths occurred, sealed up the effects of the deceased, and took an inventory of their property, without being, in the least, controled by any species of military authority. On the removal of the seals, the town-major or his adjutant received a specific statement of every thing which appertained to the situation or appointment of the deceased person or persons, which statement was transmitted to government.

The creditors of the deceased preferred a schedule of the debts contracted in each place of residence, before any of the ordinary justices, which debts were discharged out of the personal property that was left. But all other creditors must have recourse to the judge or justice belonging to the precise spot where the deceased resided; applications respecting all debts which exceeded the value of the personal effects were directed to be made through the same channel.

When officers died in a garrison town or upon a march, or when engineers, who had no particular fixed residence, or artillery officers that were upon leave, departed this life, the town-majors or aid-major of the towns or places, where such persons died, fixed their seals upon their effects. An inventory of these effects was afterwards taken, provided they were not claimed by the next heir; in which latter case, all the debts that had been contracted by the deceased in the place where he died, were ordered to be paid by the person who took possession of the property. Public notice was given by beat of drum, that a military sale would be made, and one sol in the livre was charged on all that was disposed of in this manner.

The man who beat the drum, and the person who enregistered the minutes of the sale, were paid out of this sol; whatever surplus remained, after a reasonable deduction had been made for these purposes, became the town-major's property. The produce of the sale was appropriated to the discharge of such debts as had been contracted in the garrison: and the judge or magistrate, whose particular province it was to take cognizance of all cases relating to property, placed his seal upon the remainder, which was deposited in a box. This box was delivered over to the person that had enregistered the effects and taken minutes of the sale; in whose hands it remained until claimed by the widow of the deceased, the residuary legatee, or by any creditors, except those who immediately belonged to the garrison.

When a captain in the French guards died or was killed, his heirs or executors were not obliged to discharge any demands which his company might have had upon him. If the sale of his private property should not be sufficient to defray these debts, the officer who succeeds to the company is bound to make up the remainder, and the soldier's claim has the preference of all other demands. If there was an overplus, it was paid into the hands of the lawful heirs. The soldiers of the company received the moiety of what was due to them in ready money.

On the decease or departure of the officers belonging to any of the detached companies of invalids, the superior officer of that detachment in which the death or dereliction happened, ordered every article belonging to the royal hospital of invalids to be sold in the presence of the several officers, without deducting the sol in the livre. The produce of this sale was placed to the credit of the detachment; and all other articles belonging to the deceased were disposed of by the town-majors in the manner already mentioned.

The powers which were vested in the town-majors and staff-officers belonging to garrisoned places, were lodged in the hands of the majors or aid-majors of regiments, who upon the decease of an officer on service or in a place where there was not any staff, took a regular inventory of his effects, &c.

Town-majors were not authorized to put their seals upon the effects of deceased officers belonging to the Swiss regiments, as these had a peculiar military jurisdiction of their own. But other foreign troops in the service of France were not entitled to these privileges.

INVENTORY *of deceased officers effects, &c.* In the British army, when any commissioned officer happens to die or is killed on service, it is directed by the articles of war, that the major of the regiment, or the officer doing the major's duty in his absence, shall immediately secure all his effects or equipage then in camp or quarters; and shall before the next regimental court-martial make an inventory thereof, and forthwith transmit the same to the office of our secretary at war, to the end, that the executors of such officer may, after payment of his regimental debts and quarters, and the expences attending his interment, receive the overplus, if any be, to his or their use.

When any non-commissioned officer or private soldier, happens to die, or is killed on service, the then commanding officer of the troop or company, shall, in the presence of two other commissioned officers, take an account of whatever effects he dies possessed of, above his regimental clothing, arms, and accoutrements, and transmit the same to the office of the secretary at war. These effects are to be accounted for and paid to the representatives of such deceased non-commissioned officer or soldier; and in case any of the officers so authorized to take care of the effects of dead officers and soldiers, should, before they have accounted to their representatives for the same, have occasion to leave the regiment by preferment or otherwise, they are ordered before they be permitted to quit the same, to deposit in the hands of the commanding officer or of the agent of the regiment, all the effects of such deceased non-commissioned officers and soldiers, in order, that the same may be secured for, and paid to, their respective representatives. See Articles of War, section XIX.

To INVEST *a place, (investir une place,* Fr.) A fortified town or place is said to be invested, when all the avenues leading to it have been seized upon by hostile troops, which are distributed and posted on the principal commands, to prevent any succour from being received by the garrison, and to keep the ground until the rest of the army with the artillery, can arrive to form a regular siege. To invest a place is, in fact, to take preparatory measures for a blockade, or a close siege. In order to do this effectually, the general in chief of the approaching army must detach a large body of cavalry, together with the different corps of dragoons under the command of a lieutenant-general, for the purpose of regularly investing the town. As secrecy is of the utmost consequence on this occasion, the troops belonging to the detachment must have their march so managed as to create an alarm and jealousy in some other quarter, by deviating from the road which leads directly to the proposed object of attack. The general, indeed, would act wisely, by giving written sealed orders to the commanding officer, with strict injunctions not to open them until the detachment should have reached a certain spot, and then only in the presence of some particular persons; by which means his real designs may be concealed. Sometimes a place is partially *invested*, for the sole purpose of diverting the enemy's attention from the real object, and of inducing him to weaken the garrison, by detaching it to different quarters. Thus in 1710, the allied army suddenly appeared before the town of Ypres, and by threatening to besiege it, caused so many troops to be detached from Tournay to its relief, that the latter place, which was the real object of attack, and was one of the strongest towns in the Low Countries, afforded little or no resistance.

It is sometimes prudent to harrass and perplex the enemy that may be in the neighborhood of the town which you propose to attack, by perpetually driving in his out-posts, &c. and by forcing him to retire from the different avenues and commanding grounds; when the various objects, which are to facilitate the approaches of the besieging army, have been accomplished, the lieutenant-general who is entrusted with the investment of the town, must procure faithful and intelligent guides, advance by forced marches, halt as little as possible, and then only for the purpose of refreshing his men. He must studiously preserve the secret of his expedition, until he gets so near to the town, that the object of his approach becomes manifest and unequivocal.

When he arrives within one days march of the town, he must detach from his main body two or three parties of horse, (each party to be stronger than the garrison of the place) which must lie in ambush in the neighborhood, for the purpose of carrying off cattle, or of making prisoners. The instant he reaches the town, he must seize upon all the leading avenues, and draw his army up on some advantageous ground. He then goes out to reconnoitre, and to discover the most likely places by which succours might be conveyed into the town. He must have the precaution to post a strong guard in each of these places.

His next business will be to send out small scouting parties, in order to obtain correct intelligence respecting the enemy's motions. Every outlet is blocked up by some dragoons, for the purpose of hemming in the garrison as close as possible. He makes it his study moreover to acquire personal information by examining the prisoners, with regard to the nature of the country, the different fords, rivulets, points of enfilade, avenues, strong buildings, or commanding heights in the neighborhood. He further enquires as to the strength of the garrison, and the number of officers; whether the governor suspects that a regular siege is intended: whether he expects succours, supplies of stores and ammunition, and from what quarter he is to be furnished; finally, whether the fortifications be in good repair, and the place equal to a defence.

At night he sends out advanced parties, with directions to biouac within musquet shot of the town, and takes especial care always to post strong parties in those places and avenues by which succours and supplies might be easily conveyed to the garrison. He has likewise the precaution to have different small guards, or out-lying and in-lying piquets, both in his front and rear, to prevent surprizes.

On these occasions the detachments are formed, half on foot and half mounted; those on foot constantly remaining at their horses' heads, bridle in hand. These detachments are on the alert during the whole of the night, and only one half of the number is suffered to repose during the day.—Whenever the commanding officer has received intelligence of the approach of a body of troops to relieve the garrison, he must make his dispositions in such a manner as to give them battle, before they get sufficiently near to throw themselves into the town in scattered and divided parties. Great caution, however, must be observed under these circumstances, not to advance too far, lest it should only prove a feint on the enemy's part, in order to induce him to weaken some of his posts; and by taking advantage of their absence, to throw some succours into the town.

As the principal, indeed the only object which the lieutenant-general can have, is to prevent any assistance being given to the garrison, whilst he *invests* the place, he must always be on horseback; he must incessantly visit the different posts, thoroughly reconnoitre the country, and minutely examine those quarters, through which succours or supplies might be conveyed to the garrison, or which offer advantageous positions for his own troops to occupy. During the *investment* of the town, it will be his duty to collect all the intelligence and information he can, respecting the state of the works and the adjacent points, in order to communicate fully with the general in chief, when he brings up the besieging army, and to put him in full possession of every thing, which may facilitate the object of his enterprize.

The chief engineers should always accompany the lieutenant-general who is entrusted with the *investing* of a town, in order to get the necessary knowlege of the place before hand, and to understand how the lines of circumvallation, &c. should be drawn, three or four days before the main army arrives; they should moreover make several rounds for the purpose of reconnoitring. These measures will conduce a great deal towards a wise and effectual method of *investing* the place. To accomplish these ends, a correct plan of the town must be procured. This plan must be reduced, and a rough sketch taken of every thing within half a league of the circumference of the town; after which a small chart may be drawn of the lines, &c. which are to be made for the purpose of carrying on the siege. This must be done in concert with the lieutenant-general who ought to know better than any body, what the order of battle will be, how much ground is to be occupied by the different brigades and regiments and what the relative detail of the whole army will require.

From the day on which a town is *invested*, every thing is thrown into motion. The train of artillery is directed to be brought out with necessary stores and ammunition, and proper carriages, with their drivers, are impressed; every department, in a word, performs its allotted duty, and the board of ordnance, as well as the commissary general's office become subservient to the orders that are issued by the general in chief.

Whilst the necessary measures are adopted for the close *investing* of the town, the main army approaches by forced marches, and generally arrives before the place five or six days after it has been invested. The lieutenant-general, or officer commanding the *investing* army goes out to meet the main body when it is within half a league of the place, and communicates with the general; who, in consequence of the report he makes, gives directions respecting the lines of circumvallation, &c.

For further particulars on this article, see *Traité de l'Attaque des Places par le Marechal Vauban revue, &c. F. P. Foissac Chef de brigade au corps du Génie de la Republique Francaise*, vol. i. page 69.

INVESTISSEMENT. (A French word which is strictly military. The celebrated Vauban has erroneously used *investiture* to signify the same thing.) The act of investing any town or place in such a manner as to prevent the garrison or inhabitants from receiving succours or provisions.

To INUNDATE, in a military sense, is to overflow any part of a country, in order to prevent an enemy from advancing. Holland is particularly calculated for this species of defence.

INUNDATION. The act of letting water into a country, so that it shall be overflowed to prevent the approach of an enemy.

In the *Instruction adressée aux officiers d'Infanterie pour tracer et construire toutes sortes d'Ouvrages de Campagne, &c. par A. P. I. Belair, Chef de Brigade*, may be found some very sensible observations on the means of making inundations to answer military purposes, see page 119, &c. Chapitre Huitieme, *Moyens de faire des Inondations*. We likewise refer our military readers to the *Elemens de Fortification*, published by the same author, see pages, 75, 82, 83, and 84. In page 294 of his *Dictionnaire Militaire*, some excellent observations upon the same subject, may be seen under the article *Architecture hydraulique*.

JOAR, *Ind.* A general massacre of the women and children, which is sometimes performed by the Hindoos, when they find they cannot prevent the enemy from taking the town. When this dreadful and unnatural ceremony is to take place, a spot is selected, which is filled with wood, straw, oil, &c. the victims are enclosed, and the whole is set on fire.

To JOIN. A technical word used in

the British service, generally signifying to effect the junction of one military body with another. In a more limited sense, it means the accession of an individual voluntarily, or otherwise, to a corps or army. If an officer on being ordered to join, omits to do so wilfully, he is liable to be tried by a general court-martial, or to be peremptorily suspended by the commander in chief for being absent without leave.

JOINT *Bolts.* See Bolts.

JOLS, *Fr.* Barges so called, are used in Denmark, and sometimes by the Russians.

JONCTION, *Fr.* See Junction.

JOODAY PERRAPUT, *Ind.* A term used in India to signify a slave taken in war.

JOOMAN, *Ind.* Friday so called in India.

JOUE! *Fr.* A word of command in the French service answering to *aim!*

Coucher en Joue, *Fr.* To aim with a musquet, or other fire-arm, which is used as such—as *je l'avois déjà couché en joue*, I had already taken my aim at him.

JOVES, *Fr.* The two sides in the epaulement of a battery which form the embrazure are so called.

JOUR, *Fr.* The tour of duty which is done in the course of a day and night.

Etre de Jour, *Fr.* To be officer of the day, or to command a body of troops at a siege or otherwise in the capacity of a general officer, &c. The usual time was 24 hours, at the expiration of which another officer undertook the duty, and was relieved by one of his own rank. See Officer *of the day*.

Ordre du Jour, *Fr.* Orders. See *General* Orders.

JOURNAL, *Fr.* A public record or general orderly book, kept in the French service, and in which every transaction that occurred during a siege is entered by the governor of the town, for the future inspection of a superior authority. The general officer who carried on the siege of a place likewise kept a document of the sort, and minuted down every thing that happened under his command. So that the journal which was kept in this manner was a circumstantial detail of what occurred, day after day, during the attack and defence of a town.

Journal *de l'armée*, *Fr.* See Returns.

JOURNEE, *Fr.* A term used among the French, to express any particular engagement or battle, as *la journée de Marengo*, the battle of Marengo. We frequently adopt the word day in the same sense: thus a hard fought *day* signifies a hard fought *battle*.

JOUTE, *Fr.* A close fight between two individuals. It likewise means an engagement at sea.

JOUTER, *faire des joutes*, Fr. To run a tilt at one another with lances.

JOUST. See Just.

IRAN, *Ind.* Persia.

IRENARCH, (*Irenarque*, Fr.) An officer, so called in the old Grecian empire, *irenarcha præfectus pacis*. His principal duty was to preserve public tranquillity, and his functions were nearly similar to those of the French *prévots de maréchaussées*, or police magistrates. We read in the Justinian code of laws, that the *irenarchs* were sent into the different provinces, for the purpose of preserving peace and good order. They were therefore invested with authority to take cognizance of all crimes and misdemeanors, and to punish the delinquents. There was likewise an *irenarch* established in every town, to settle the disputes and differences which might arise between the inhabitants, and to secure public tranquillity. This person was anciently called *præfectus urbis*. The office of *irenarch* was abolished under the Emperors Theodosius and Honorius, it having latterly been found more productive of evil than good. The word itself is derived from the Greek, and signifies *Prince of Peace*.

IRREGULAR *Fortification*. See Fortification.

IRON *Guns*. See Guns.

IRONS. See Priming Irons.

ISLAUD, *Ind.* A term to express slow music among the Indians.

ISOCELES, a triangle having only two sides which are equal.

ISOLE, *Fr.* This word is used among the French, to express any body or thing which is detached from another. It is variously applied in fortification. Thus a pavillion or a barrack which is not joined to any other wall or building is called *isolé*, because it stands alone, and a person may walk entirely round it. A parapet is also said to be *isolé*, when there is an interval of four or five feet between the rampart and its wall; which interval serves as a path for the rounds.

ISOPERIMETRICAL *Figures*.—(*Figures Isoperimetriques*, Fr.) A term derived from the Greek to express all figures that have equal circumferences or perimeters.

ISSUE, event; consequence; the ultimate result of any undertaking; the termination of any contest.

General Issue. In matters of litigation is the question to be decided upon, or issue, the parties state certain facts, one asserts the fact, the other denies, and upon this they join issue, the determination of that fact is the issue.

ISTHMUS, (*Isthme*, Fr.) A neck of land which joins the Peninsula to the Continent, and which separates two seas, as Darien; Corinth.

ITINERAIRES, *Fr.* Itinerary movements or days of march. A technical phrase among the French to denote the order and disposition which a body of men, or an army, is directed to observe in its march from one camp to another, or to any particular quarter of destination.

ITMAMDAR. *Ind.* A superintendant or lieutenant-governor in India.

JUDGES are authorized to take judicial notice of the articles of war.

JUDGE MARTIAL, *or Advocate General*, the supreme judge in martial law as to the jurisdiction and powers of military courts, in the British system. It is incumbent upon this person, as well as upon his deputies to be well acquainted with the laws of the land, that they may admonish the court or president when their proceedings are tending to infringe the civil law. He is register of courts-martial, and should take down the evidence in the very words of the witness. He is neither a judge nor a juror as to the charge.

JUGE, *Fr.* A sort of judge or provost marshal. This term was particularly applicable to the interior government of the Swiss guards that were in the service of France. Each regiment of that description had one judge or provost marshal per company, and one superior to the rest who presided over the regiment. The inferior judge was called *richter*, and the grand or superior judge *obster richter*. The inferior judges had the examination of petty crimes and offences which they reported to the captain of the company. If the crimes were of a serious or heinous nature, the inferior judges drew up a specific statement of them, and laid the whole before the *obster richter*, who communicated the circumstance to the colonel. Grounds for a general court-martial were generally established out of the latter report.

JUGG, *Ind.* An Indian sacrifice.

JUGGUT GROW, *Ind.* An Indian term which signifies *guardian of mankind*.

JUMBAUN, *Ind.* In Indian music, means, *shake*.

JUMBOO DEEP, *Ind.* A word particularly used to signify India; it is derived from *jumboo* or *jumbook*, a jackal, and *deep*, any large portion of land which is surrounded by the sea.

JUMBOO DEEP, *Ind.* The inhabitants of India were so called before the introduction of the Tartar governments.

JUMMA KERCH, *Ind.* An account, stating the receipt and expenditure of the revenue; that is the gross or general account.

JUNCAN, *Ind.* A toll or duty on every thing that passes.

JUNGLE, An Indian term for a wood, or woody country. It likewise means high grass, reeds, or thicket.

JURISDICTION. Legal authority, extent of power. Officers not being liable to be tried by garrison or regimental courts-martial, may appeal from the jurisdiction of such courts; as may non-commissioned officers and soldiers in cases where their pay is concerned.

JUST. A sportive combat on horseback, man against man, armed with lances; called also *Joust*, *Tilt*, *Tournament*, &c.

JUSTICES. Military men are, in many instances, under the necessity of applying to justices in order to execute their several orders and instructions without infringing upon the civil authorities; and justices on their side are bound to aid and assist the military in conformity to established laws and regulations.

Military JUSTICE, (*Justice Militaire*, Fr.) That species of justice which prevails in the army, and corresponds with the articles of War.

K

KABBADE or CABADE, *Fr.* A military dress which is worn by the modern Greeks. According to Tzetzes it derives its name from Cabades, a Persian king. Codinus, on the other hand, asserts, that the Greeks in Constantinople adopted it in imitation of the Assyrians. Others again maintain, that it owes its appellation to the resemblance which it bears to a Greek letter. Father Goar, the author, very justly ridicules this etymology. We are, however, authorized to say, that be the derivation of the word what it may, the dress itself consists of a short garment which was worn underneath another. It had not any folds, but sat close to the body, being buttoned with large buttons, and reaching down to the calves of the legs. It was fringed round the edges, and was usually worn with a girdle; such is the description which Father Goar has given of the kabbades in his notes upon Codinus. He concludes by observing, that in his opinion it is what the Romans called *sagum*, and the modern Greeks afterwards corrupted into *kabbade*.

KAK TOWDA, *Ind.* Fine mould beat strongly in between two walls, for the purpose of shooting arrows into when the walls are taken away.

KALEE, *Ind.* An Hindoo deity the genius of evil; the infernal god, to whom human beings are sacrificed.

KALLAAT or KELAUT, *Ind.* a dress which is given to any person invested with a new office.

KALMUCS, (*Kalmouques*, Fr.) This word is generally written *Calmucs*. They are wandering tribes of Tartars, who inhabit the parts north of the Caspian sea. These hordes frequently put themselves under the protection of the court of Russia. A French writer describes the Kalmucs to be a sort of militia, which is established between Siberia and the Caspian sea. There are generally some regiments of them attached to the Russian armies in common with the Cossacks. They are armed with a lance iron pointed, about six feet long, and carry a bow with a quiver upon their backs, containing ten arrows. They never serve on foot, and are only formidable by name.

KALSA, *Ind.* The treasury.

KALSA CUTCHERRY, *Ind.* the room of business, where the business of the army is transacted; and all matters of litigation on that branch of service is determined.

KHAN, an officer in Persia, who is invested with the same powers that are entrusted to an European governor.

KANAUTS, *Ind.* a term used in India, t6 express the walls of a canvas tent:

KATAA, the Indian name for China.

KATIK, an Indian month, which in some measure coincides with our month of October.

KAULAUBHAIJE, the Indian term for message.

KECHERKLECHI, guards attached to the person of the king of Persia; they are armed with a musquet of an extraordinary size and calibre. They were raised and formed into a regular corps the middle of the last century.

KEELS, the long boats in which the Saxons successfully invaded England were so called.

KEEP, in ancient military history, a kind of strong tower which was built in the centre of a castle or fort, to which the besieged retreated and made their last efforts of defence. Of this description is the keep of Windsor Castle.

King's KEEP, a fort built by king Henry II. in the interior part of Dover castle is so called.

To KEEP *off*, in a military sense, is either to deter your enemy from approaching close to the lines or fortifications by inducing him to suspect a superior force, an ambuscade, or a mine, or by openly galling his advanced posts in such a manner as to beat him in detail. Infantry may keep off cavalry by hot firing, or by a compact intrepid direction of the bayonet.

To KEEP *up*, in military movements, is the preservation of that regular pace, by which a line or column, on a march, or in manœuvring, advances towards any given point without any chasms or fluctuations. When a regiment marches by files, it is almost impossible for the rear to keep up. On this account, divisions, subdivisions, and even sections, are best calculated to preserve a regular depth and continuity of march.

To Keep *up*, likewise signifies to attend to the interior management and discipline of a corps, so as to prevent the least deviation from established rules and regulations. Thus commanding officers are said to keep up good order and discipline, who, whilst absent or present, provide against the least insubordination, &c.

To Keep *up a heavy fire*, is to play with heavy ordnance against a fortified place, or body of men, by a calm and well-directed succession of shot. In musquetry firing, officers commanding battalions, divisions, or platoons, should be very exact in giving the word in order to keep up the different firings.

KEERAY, *Ind.* expences, charges.

KENT. It is the peculiar duty of the county lieutenant, or of three deputy lieutenants belonging to this English county, to issue orders to the chief constables of the several hundreds to send out precepts to the churchwardens or overseers to return a list of men liable to serve. The churchwardens and overseers of the county of Kent are, by act of parliament, invested with the powers of constables, to put in force the militia acts.

KENTASSI, a range of mountains in Thibet, in which are the sources of the Ganges. This river, formed from several sources, passes successively two great lakes, and flows to the west, until the opposition of a part of the Indian Caucasus turns it to the south, and having completed in these various directions a course of two hundred leagues, it enters India by forcing its passage through the mountains of the frontier.

KERANA, a long trumpet, similar in shape and size to the speaking trumpet. The Persians use it whenever they wish to make any extraordinary noise, and they frequently blow it with hautboys, kettle drums and other instruments at sunset, and two hours after midnight.

KEREEF, *Ind.* One of the two seasons into which the year is divided in India.

KERIMCHARRY, *Ind.* an inferior officer under the Zemindar, who collects from the villages, and keeps the accounts.

KERN. *Irish*, a soldier. The Irish infantry were formerly distinguished by this appellation. The men in those days were armed with a sword, and a dart or javelin, which was tied to a small cord, so that after they had thrown it at the enemy, they could instantly recover it, and use it in any way they thought proper. The javelin was called *skene*, which is also the Irish for a *knife*.

KERUI, *Ind.* a village or parish.

KETTLE, a vessel used to boil composition for fire-works.

KETTLE-*Drums*. See Drums.

Kettle-*drum cart*, a four wheel carriage which is drawn by four horses, and is used exclusively by the British artillery as a pageant.

The ordnance flag is planted on the fore part, and the drummer with two kettle drums is seated, as in a chair of state, on the back part. This cart is finely engraven and richly gilt. It has not been in the field since the year 1743, when the king was present. It is kept in the tower.

KEYS, in a general sense, are instruments with which locks are opened.

Keys, in artillery carriages, may be considered under three specific heads, viz.

Fore-lock Keys, which serve to pass through the lower end of bolts, in order to fasten them.

Spring Keys may be used in the same manner, but are differently made, for instead of being of one single piece, they are of two, like two springs laid one over the other. When they are put into eye-bolts, they are pinched together at the ends, and when they are in, they open again; so that the motion of the carriage cannot disturb or shake them out. Spring keys are peculiarly useful in travelling carriages.

Keys *with chains and staples* fixed on the side pieces of a carriage or mortar bed. They serve to fasten the cap squares by passing through the eyes of the eye-bolts, with or without.

Key *stone*, in architecture, is the middle stone of an arch, by which the sweep of the arch is bound together.

Key. See Quay.

KEYSERLICKS, or *imperialists*, the Austrian troops are frequently called so. The term was indeed common among the British soldiers, when they did duty together, and invaded France in 1794. It is derived from *keyser*, from Ceasar, which in German, signifies emperor.

KHAN, *Ind.* signifies lord or chieftain. This title was given by the king of Delhi, for which it is supposed, the person maintained 250 horse soldiers, which he commanded and disciplined for the king's service.

KHEET, *Ind.* a fortified city, which is four coss or eight English miles in length and breadth, and not so much as eight coss.

KHODA, *Ind.* God.

KHODADAUD SIRCAR, *Ind.* That is the government or ruler blessed or beloved of God; it was a title assumed by Tippo Sultaun, the sovereign of the kingdom of Mysore, who fell in defence of his capital, Serungputtun, or Seringapatam, when it was stormed, May the 4th, 1799, by the British forces under the command of lieutenant general Harris.

KID. This appellation was formerly given to any person that was trepanned by kidnappers.

KIDNAPPER, a man who by improper means decoys the unwary into the army or navy.

KIEU, the Indian term for any bridge under which water flows.

KILLA, *Ind.* a castle, fort, or fortress.

KILLADAR, *Ind.* the governor or commandant of a fort.

KINDALAHS, a vagabond, outcast set of people in India, originally belonging to the Hindoo tribe. By such proscription and disgrace are these miserable creatures marked, that the people of other casts not only will not visit them, but if any one of them should presume to approach a person of the Nayr tribe, it is lawful for the latter to put him to instant death.

To KINDLE, in a military sense, is to excite mankind to arms. To kindle the flames of war is a familiar expression.

KING from the Saxon *koning*, that is *cunning*, *wise*; it has come to bear a different sense, and to signify a person neither cunning nor wise; a person in whom a supreme or qualified authority is vested without the consent of a nation. The chief magistrate, and one of the three nominal parts of the British government.

In a military acceptation of the term, the king of Great Britain is captain general of the British army, the primary source from which all appointments in it are derived, and the last resort of naval and military jurisdiction. With him, as principal magistrate in the state, and head of the executive power, all the arrangements of the British army finally rest, as from him they primarily issued. From him all the effective forces derive energy and effect, and when war has been declared, to him only does the army look for the immediate application and general exercise of its powers, through the medium of the ministers he appoints, who are responsible to parliament for the manner in which the authority they have received has been executed.

The British king is likewise supreme head of the militia, and has the power of appointing or dismissing lieutenants of counties. This king may likewise order three deputy lieutenants to act, when the lieutenant is abroad, or when there is a vacancy. He may join independent companies into a battalion, or incorporate them with any other regiment; and by him only can adjutants be appointed to act in the militia. If they are selected from the regular army, they preserve their rank, and their new commission bears the sign manual.

In case of an invasion or rebellion, the British king has the power to order the county lieutenants to embody the militia, and to put it under general officers from the regular army On these occasions he may issue a proclamation for the meeting of parliament in fourteen days.

The word king is synonymous with *monarch*, *tyrant*, *despot*, and an emperor is only a higher grade of king.

King *at Arms*. See Herald.

KIOSQUE, *Fr.* a sort of garden pavillion which is open on all sides. It is used in the Levant, particularly in Turkey, and at Constantinople.

KISSELBACHES, *Ind.* soldiers are so called in India.

KIST, *Ind.* an instalment; the amount of a stated payment.

KISTYBUNDY, the Indian term for a monthly payment or periodical instalment

KITSBUNDY, a contract or agreement for the discharge of any debt or obligation by stated payments.

KIT, in laboratory works, a composition made, of rosin 9lb. pitch 6lb. bees wax 6lb. and tallow 1lb. used for the last covering of carcasses. In order to apply it properly, it must first be broken into small pieces, and put into an iron pot over the fire, where it must be kept stirring about until it be thoroughly dissolved. When rendered very hot and completely liquid, it may be used.

Kit is likewise used among dragoons, to signify their lot of necessaries, which is packed up in a very small compass. The term is also used by the infantry, and means the contents of a soldier's knapsack.

KLINKETS, in fortification, are small gates made through pallisades for the purpose of sallying.

KNAPSACK, a rough leather or canvas bag, which is strapped to an infantry soldier's back when he marches, and which contains his necessaries. Square knapsacks are supposed to be most convenient. They should be made with a division to hold the shoes, blacking-balls, and brushes, separate from the linen. White goat skins are sometimes used, but we do not conceive them to be equal to the painted canvas ones. Soldiers are put under stoppages for the payment of their knapsacks, which after five years, become their property. See list of necessaries, according to the last regulations, under the article Necessaries,

KNAVE, for its military acceptation, see Infantry.

KNIGHT, a person who, in ancient times, on account of some eminent service, civil or military, was singled out from the common class of gentlemen, &c. and was personally invested with a title. This word, which was originally derived from the German and Dutch *knecbt* or *knebt*, signifies a servant, in which sense it is applied when we speak of the knight of a shire; it likewise means a military man, or rather a horseman, from the Latin *eques*, a soldier or horseman; knights of this description having been either the king's domestic servants or of his life guards.

In common law they are called *milites*, usually holding lands under the feudal tenure by knight's service, to serve the king in his wars.

KNOT, the wing or epaulette, which is commonly made of worsted, of a non-commissioned officer or corporal. When serjeants and corporals are sentenced to be reduced to the ranks, the knot is generally cut off by the drum-major in the presence of the battalion, as a mark of ignominy.

Knots, the division of the log line. Each knot is equal to an English mile.

KNOUT, a Russian punishment.

KOHISTAN, *Ind.* properly means a province. It likewise signifies a rocky or mountainous country.

KOLLEE *Jogue*, Ind. is the fourth of the four æras or periods of Indian chronology. It is the present æra, in which all mankind are corrupted, or rather lessened; it is supposed to be ordained to subsist four hundred thousand years, of which near five thousand are already expired, and the life of man, in that period is limited to one hundred years. *Colonel Dow* says this age is to last thirty-six thousand years: the age which preceded it, is called the *davapuar jogue*.

KOOLOO, *Ind.* the cocoa tree.

KOONAR, an Indian month, which partly coincides with our month of September.

KOONCHY, *Ind.* a measure of about eight handfuls.

KOONWUR, *Ind.* prince, highness.

KOREISH, *Ind.* an Arabian tribe.

KORTCHI-BACHI, the chief or commanding officer of the Kortchis. In former times he was the first military character in Persia, at present he is only the second in command. He never leaves the court except upon extraordinary occasions, when his presence is required at the army. This, however, rarely happens, as the king is obliged to furnish him with an household service of plate, and to detach a part of his own guards for the protection of his person. The Kortchi Bachi is generally entrusted with one of the chief governments belonging to Persia.

KORTCHIS, a body of Persian cavalry, which is stationed along the frontiers of the country. Every individual belonging to this corps, receives fifty crowns for his annual pay. The children of the Kortchis succeed their fathers, with the consent and approbation of the general. The Kortchis are descended from a race of foreigners, who used to live under tents, and were always distinguished for their courage.

KOSSACKS, (*Kosaques*, Fr.) See Cossacks.

KOTE, *Ind.* a warehouse

KOULER-AGASI, a distinguished military character in Persia, who has the command of a body of men called *Kouls*. He is usually governor of a considerable province.

KOULIE, a courier, a porter, a slave.

KOURIE, *Ind.* a sea-shell used as money in many parts of india.

KOULS, a corps of Persian soldiers who rank as a third body among the five that constitute the king's household troops; they mount guard under the portico which stands between the first and second gate leading to the palace. The Kouls are men of note and rank; no person can arrive at any considerable post or situation, who has not served among the Kouls. Their number is computed at 4000 men.

KOYAL, *Ind.* a weighman.

KOYALEE, *Ind.* fees for weighing.

KRAMA, *Ind.* wooden sandals which are worn by the natives of India during the wet season.

KUFFEET, *Ind.* An Indian term for security.

KUL, the Turkish word for slave to the prince. The grand vizier, the bachas, the beiglerbeys, and all persons who receive pay or subsistence from situations dependent upon the crown, are so called. This title is in high estimation among the Turkish military, as it authorizes all who are invested with it, to insult, strike and otherways ill use the common people, without being responsible for the most flagrant breach of humanity. Horrid pre-eminence, and fitted only to Mahomedan civilization!

KULLUSTAUNS, *Ind.* Christians.

KUNDNEE, *Ind.* A sum of money which is annually paid by an inferior governor to his superior.

KUPELE, Straights so called in India, through which the Ganges disembogues itself into Hindustan. They are distant from Delhi about 30 leagues, in the longigitude of 96, and in the latitude of 30. 2. These straights are believed by the Indians, who look very little abroad, to be the sources of the Ganges: and a rock 15 miles distant from them, bearing some resemblance to the head of a cow, has joined in the same part of the nations, two very important objects of their religion: the grand image of the animal which they almost venerate as a divinity, and the first appearance of that immense body of holy water which washes away all their sins. It was at these straights that the Indians made some shew of resistance, when the famous Tamerlane invaded India. The field of this victory is the most distant term of that emperor's conquest in India and on the globe. See Dissertation on the establishments made by Mahomedan conquerors in Hindustan, in Orme's History of the Carnatic, page 14, and 15.

KURROL, *Ind.* The advanced guard of a main army.

KURTCHI, a militia is so called in Persia. It consists of one body of cavalry, which is composed of the first nobility belonging to the kingdom, and of the lineal descendants of the Turkish conquerors, who placed Ismael Sophi on the throne. They wear a red turban, made of particular stuff, into twelve folds. This turban was originally given them by Ismael, in consideration of their attachment to the religion and family of Ali. The twelve folds are in remembrance of the twelve Imaans or Mahomedan preachers who descended in a direct line from Ali, and distinguished themselves so much in that sect. The turban is red, for the purpose of provoking those who wear it to avenge upon the Ottomans, the death of Ali and Hussein, who were murdered by the chief of Sunis, to whose sect the Turks belong. In consequence of their wearing this turban, the Persians are always called by the Turks *kitil-baschi* or *red-beads.* The noblemen in Persia have adopted the term, with a slight alteration, and call themselves *kesil-baschis* or *golden-beads.* The Kurtchi form a body of nearly eighteen thousand men. The chief or commanding officer is called kurtchi-baschi. This was formerly the most disdistinguished situation in the kingdom, and the authority annexed to it was equal to what the constable of France originally possessed. At present his power does not extend beyond the Kurtchis.

KUSH-BASH, *Ind.* Persons who enjoy lands rent free, upon condition of serving government in a military capacity when called upon. The term also signifies, people of middling circumstances who do not cultivate their lands themselves, but hire servants to do it while they hold other employments.

KUTTY, *Ind.* Closets.

KUVVAUS, *Ind.* Servants attending on the king's person.

KUZANA, *Ind.* A treasury.

L

LAAK, *Ind.* One hundred thousand.

LABARUM, a celebrated standard which was used among the Roman emperors, and frequently means any imperial or royal standard. The original one, so called, consisted of a long lance, at the top of which was fixed a stick that crossed it at right angles, and from which hung a piece of rich scarlet cloth, that was sometimes ornamented with precious stones. Until the days of Constantine the great, the figure of an eagle was placed upon the top of the labarum; but that prince substituted in its room, a cross, with a cypher expressing the name of Jesus.

LABORATORY signifies that place where all sorts of fire-works are prepared, both for actual service, and for pleasure, viz. quick matches, fuses, portfires, grape-shot, case-shot, carcasses, hand-grenades, cartridges, shells filled, and fuses fixed, wads, &c. &c.

Aigrettes. See MORTARS.

Ball: are of various sorts, shapes and forms; as

Chain-shot, are two shot linked together by a strong chain of 8 or 10 inches long; they are more used on board men of war, than in the land service. The famous M. de Witt was the first inventor, about the year 1665.

Light-balls, of which their are several sorts: the best composition is mealed powder 2, sulphur 1, rosin 1, turpentine 2 1-2, and saltpetre 1 1-2. Then take tow, and mix and dip it in this composition, till of a proper size, letting the last coat be of mealed powder. Or take thick strong paper, and make a shell the size of the mortar you intend to throw it out of, and fill it with a composition of an equal quantity of sulphur, pitch, rosin, and mealed powder; which being well mixed, and put in warm, will give a clear fire, and burn a considerable time.

The composition for filling balls that are intended to set fire to magazines is, mealed powder 10, saltpetre 2, sulphur 4, and rosin 1; or mealed powder 4, pounded glass 1, antimony 1-2, camphor 1-2, sal-ammoniac 1, common salt 1-4; or mealed powder 48, saltpetre 32, sulphur 16, rosin 4, steel or iron filings 2, fir tree saw-dust boiled in saltpetre ley 2, and birch wood charcoal 1. With any of these compositions fill the sack, and ram it, if possible, as hard as a stone, putting in the opening, a fuse, and about the same an iron ring 1-5th of the ball's diameter wide; and on the opposite end, another ring 1-6th of the ball's diameter; then with a strong cord of 1-4th of an inch diameter, lace round the hoops, or rings, from one end of the ball to the other, as often as is requisite; this is called the ribbed coat; then lace it again the contrary way, which is called the check coat.

Between each square cord, iron barrels are driven in, 1-3d of which are filled with powder, and a bullet: at the end of each a small vent is made, that the composition may inflame the powder, and drive the balls out on every side, which not only kill numbers of people, but prevent any one from extinguishing the fire-ball. The whole must, when finished, be dipped in melted pitch, rosin and turpentine oil; which composition fastens the whole together.

Smoke-Balls, are made and contrived to give an uncommon smoke, and thereby prevent the enemy from seeing what you are about. They are prepared as above, only the composition must be 5 to 1 of pitch, rosin, and saw-dust: the ingredients are put into iron shells, having 4 holes each to let out the smoke, and are thrown out of mortars.

Stink-
Poisoned-
Red-hot- } *Balls.* See BALLS.
Chain-
Stang-
Anchor-

Message-Balls. See SHELLS.

Fire-Barrels are at present not much used: they were of different sorts; some mounted on two wheels. The inside of the barrel is loaded with powder, and the outside full of sharp iron points, intermixed with grenades loaded, and fuses fixed. Sometimes they are placed under ground, and made use of to annoy the enemy's approach.

Carcass, in military affairs, was formerly of an oval form, made of iron bars, and filled with a composition of mealed powder, saltpetre, sulphur, broken glass, shavings of horn, pitch, turpentine, tallow, and linseed oil, covered with a pitched cloth; it is primed with mealed powder and quick match, and fired out of a mortar. Its design is to set houses on fire, &c. See CARCASS.

None but *round carcasses* are used at present, the flight of the oblong ones being so uncertain. The composition is, pitch 2, saltpetre 4, sulphur 1, and corned powder 3. When the pitch is melted, the pot is taken off, and the ingredients (well mixed) put in; then the carcass is filled with as much as can be pressed in.

Cartridges are made of various substances, such as paper, parchment, bladders, and flannel. When they are made of paper the bottoms remain in the piece, and accumulate so much, that the priming cannot reach the powder; besides other inconveniencies. When they are made of parchment or bladders, the fire shrivels them up, so that they enter into the vent, and become so hard, that the priming iron cannot remove them so as to clear the vent. Nothing has been found hitherto to answer better than flannel, which is the only thing used at present for artillery cartridges of all sorts; because it does not keep fire, and is therefore not liable to accidents in the loading: but, as the dust of powder passes through them, a parchment cover is sometimes made to put over them, which is taken off when used.

The best way of making flannel cartridges, is to boil the flannel in size; which will prevent the dust of powder from passing through, and render it stiff, and more manageable; for without this precaution cartridges are so pliable, on account of their size and the quantity of powder they contain, that they are put into the piece with much difficulty.

The loading and firing guns with cartridges is done much sooner than with loose powder, and fewer accidents are likely to occur. The heads of cartridges, especially for musquetry, are sometimes wrapped in coarse cotton.

In quick firing the shot is fixed to the cartridge by means of a wooden bottom, hollowed on one side so as to receive nearly half the shot, which is fastened to it by two small slips of tin crossing over the shot, and nailed to the bottom; and the cartridge is tied to the other end thereof. They are fixed likewise in the same manner to the bottoms of grape shot, which are used in field pieces.

Grape-shot, in artillery, is a combination of small shot, put into a thick canvas bag, and corded strongly together, so as to form a kind of cylinder, whose diameter is equal to that of the ball which is adapted to the cannon.

To make grape shot, a bag of coarse cloth is made just to hold the bottom which is put into it; as many shot are then thrown in as the grape is to contain; and with a strong pack thread the whole is quilted to keep the shot from moving. The bags, when finished, are put into boxes for the purpose of being conveniently carried.

The number of shot in a grape varies according to the service or size of the guns: in sea service 9 is always the number; but by land it is increased to any number or size, from an ounce and a quarter in weight, to four pounds. It has not yet been determined, with any degree of accuracy, what number and size answer best in practice; for it is well known, that they often scatter so much that only a small number takes effect.

Of the three different sorts of cannon which are used for throwing grape-shot, the 3-pounder seems rather the best; especially when two are used, as the effect of two 3-pounders is much greater than that of one 6-pounder. But the 8-inch howitzer, which can be made to throw in from three to five of its charge (from 12 to 20lb. of shot) becomes thereby a very formidable piece, when it can be used for grape-shot; and this is the howitzer used by the French light or horse artillery.

Proper charges for grape-shot have never yet been effectually determined: we can only give our advice from some experiments; that for heavy 6-pounders, 1-3d of the weight of the shot appears to be the best charge of powder; for the light 6-pounders, 1-4th of the weight of the shot; and for howitzers, 1-8th or 1-10th answers very well.

This kind of fire seems not yet to have been enough respected, nor depended on. However, if cannon and howitzers can be made to throw 1-3d or 1-4th, and sometimes half their charge of grape shot into a space 39 by 12 feet, at 200 and 300 yards distance, and those fired 7 or 8 times in a minute; it surely forms the thickest fire that can be produced from the same space.

Tin case-shot, in artillery, is formed by putting a great quantity of small iron shot into a cylindrical tin box, called a canister, that just fits the bore of the gun. Leaden bullets are sometimes used in the same manner; and it must be observed, that whatever number or sizes of the shot are used, they must weigh, with their cases, nearly as much as the shot of the piece.

Case shot, formerly, consisted of all kinds of old iron, stones, musquet balls, nails, &c.

Tubes, in artillery are used in quick firing. They are made of tin: their diameter is 2-10ths of an inch, being just sufficient to enter into the vent of the piece; about 6 inches long, with a cap above, and cut slanting below, in the form of a pen; the point is strengthened with some solder, that it may pierce the cartridge without bending. Through this tube is drawn a quick-match, the cap being fitted with mealed powder, moistened with spirits of wine. To prevent the mealed powder from falling out by carriage, a cap of paper or flannel, steeped in spirits of wine, is tied over it.

Flambeaux, a kind of lighted torch, used in the artillery upon a march, or the park, &c.

Formers, are cylinders of wood, of different sizes and dimensions, used in the *laboratory*, to drive the composition of fuzes and rockets.

Funnels, are of various sorts, used to pour the powder into shells, and the composition into fuses, and rocket-cases.

Fire-ship, a vessel filled with combustible materials, and fitted with grappling irons, to hook, and set fire to the enemy's ships in battle, &c.

From the bulk head at the fore castle to a bulk head to be raised behind the main chains, on each side and across the ship at the bulk heads, is fixed, close to the ship's sides, a double row of troughs, 2 feet distance from each other, with cross troughs quite round, at about 2 1-2 distance; which are mortised into the others. The cross troughs lead to the sides of the ship, to the barrels and to the port holes, to give fire both to the barrels and to the chambers, to blow open the ports; and the side troughs serve to communicate the fire all along the ship and the cross troughs.

The timbers of which the troughs are made, are about 5 inches square; the depth of the troughs, half their thickness; and they are supported by cross pieces at every 2 or 3 yards, nailed to the timbers of the ship, and to the wood work which incloses the fore and main masts. The decks and troughs are all well paved with melted rosin.

On each side of the ship 6 small port holes are cut, from 15 to 18 inches large, the ports opening downwards, and are close caulked up. Against each port is fixed an iron chamber, which, at the time of firing the ship, blows open the ports, and lets out the fire. At the main and fore chains, on each side, a wooden funnel is fixed over a fire barrel, and comes through a scuttle in the deck, up to the shrouds, to set them on fire. Both funnels and scuttles must be stopped with plugs, and have sail cloth or canvas nailed close over them, to prevent any accident happening that way, by fire, to the combustibles below.

The port holes, funnels, and scuttles, not only serve to give the fire a free passage to the outside and upper parts of the ship, and her rigging, but also for the inward air (otherwise confined) to expand itself, and push through those holes at the time of the combustibles being on fire, and prevent the blowing up of the decks, which otherwise must of course happen, from such a sudden and violent rarefaction of the air as will then be produced.

In the bulk head behind, on each side, is cut a small hole, large enough to receive a trough of the same size of the others; from which, to each side of the ship, lies a leading trough, one end coming through a sally port cut through the ship's side, and the other fixing into a communicating trough that lies along the bulk-head, from one side of the ship to the other; and being laid with quick match, at the time of firing either of the leading troughs, communicates the fire in an instant to the contrary side of the ship, and both sides burn together.

Fire barrels, for a fire-ship, are cylindric, on account of that shape answering better both for filling them with reeds, and for stowing them between the troughs: their inside diameters are about 21 inches, and their length 33. The bottom parts are first filled with double-dipt reeds set on end, and the remainder with fire-barrel composition, which is, corned powder 30lb. Swedish pitch 12, saltpetre 6, and tallow 3, well mixed and melted, and then poured over them.

There are 5 holes of 3-quarters of an inch diameter, and 3 inches deep, made with a drift of that size in the top of the composition while it is warm: one in the centre, and the other four at equal distances round the sides of the barrel. When the composition is cold and hard, the barrel is primed by well driving those holes full of fuze composition, to within an inch of the top; then fixing in each hole a strand of quick-match twice doubled, and in the centre hole two strands the whole length; all which must be well driven in with mealed powder: then lay the quick-match all within the barrel, and cover the top of it with a dipt curtain, fastened on with a hoop to slip over the head, and nailed on.

Bavins, for a fire-ship, are made of birch, heath, or other sort, of brush-wood, that is both tough and quickly fired: in length 2. 5, or 3 feet; the bush-ends all laid one way, and the other ends tied with two bands each. They are dipped, and sprinkled with sulphur, the same as reeds, with this difference, that the bush ends, only, are dipped, and should be a little closed together by hand, as soon as done, to keep them more compact, in order to give a stronger fire, and to preserve the branches from breaking in shifting and handling them Their composition is, rosin 120lb. coarse sulphur 90, pitch 60, tallow 6, and mealed powder 12, with some fine sulphur for salting.

Iron-chambers, for a fire-ship, are 10 inches long, and 3.5. in diameter; breeched against a piece of wood fixed across the holes. When loaded, they are almost filled full of corned powder, with a wooden tompion well driven into their muzzles They are primed with a small piece of quick-match thrust through their vents into the powder, with a part of it hanging out; and when the ship is fired, they blow open the ports, which either fall downwards, or are carried away, and so give vent to the fire out of the sides of the ship.

Curtains, for a fire-ship, are made of barras, about 3-quarters of a yard wide, and 1 yard in length: when they are dipped, 2 men, with each a fork, must run the prongs through the corner of the curtain at the same end; then dip them into a large kettle of composition (which is the same as the composition for bavins) well melted; and when well dipped, and the curtain extended to its full breadth, whip it between 2 sticks of about 5.5 feet long, and 1-5 inches square, held close by 2 other men to take off the superfluous composition hanging to it; then immediately sprinkle saw-dust on both sides to prevent it from sticking, and the curtain is finished.

Reeds, for a fire-ship, are made up in small bundles of about 12 inches in circumference, cut even at both ends, and tied with two bands each: the longest sort are 4 feet, and the shortest 2.5; which are all the lengths that are used. One part of them are single dipped, only at one end; the rest are double-dipped, *i. e.* at both ends. In dipping, they must be put about 7 or 8 inches deep into a copper kettle of melted composition (the same as that for bavins;) and when they have drained a little over it, to carry off the superfluous composition, sprinkle them over a tanned hide with pulverised sulphur, at some distance from the copper.

STORES *for a* FIRE-SHIP *of* 150 *tons.*

		No.
Fire-barrels	. .	8
Iron chambers	.	12
Priming composition barrels		3
Quick-match barrels	.	1
Curtains dipped	.	30
Long reeds single dipped	.	150
Short reeds	double dipped	75
	single dipped	75
Bavins single dipped	.	209

Quantity of COMPOSITION *for preparing the stores of a* FIRE-SHIP.

For 8 barrels, corned powder 960lb. pitch 480lb. tallow 80.

For 3 barrels of priming composition, saltpetre 175lb sulphur 140lb. corned powder 350lb. rosin 21lb. oil-pots 11.

For curtains, bavins, reeds, and sulphur to salt them, sulphur 200lb. pitch 350lb. rosin 175lb. tallow 50lb. tar 25lb.

Total weight of the composition 3017 pounds, equal to C. 26 : 3 : 21.

Composition allowed for the reeds and barrels, 1-fifth of the whole of the last article, which is equal to 160lb. making in the whole 3177 pounds, or C. 28 : 1 : 13.

Port-fires in *artillery*, may be made of any length: however, they are seldom made more than 21 inches. The interior diameter of port-fire moulds should be 10-16 of an inch, and the diameter of the whole port-fire about 1-2 an inch. The paper cases must be rolled wet with paste, and one end folded down. They are used instead of matches to fire artillery. The composition of wet port-fire is, salt-petre 6, sulphur 2, and mealed powder 1; when it is well mixed and sieved, it is to be moistened with a little linseed oil: the composition for dry port-fire is, salt-petre 4, sulphur 1, mealed powder 2, and antimony 1.

Rockets, in *pyrotechny*, an artificial fire-work, consisting of a cylindrical case of paper, filled with a composition of certain combustible ingredients; which being tied to a stick, mounts into the air to a considerable height and there bursts: they are frequently used as signals in war time.

Composition for sky-rockets in general is, salt-petre 4lb. brimstone 1lb. and charcoal 1 1-2lb; but for large sky-rockets, salt-petre 4lb. mealed powder 1lb. and brimstone 1lb. for rockets of a middling size, salt-petre 3lb. sulphur 2lb. mealed powder 1lb. and charcoal 1lb.

Quick-match in *artillery*, is of 2 sorts, cotton and worsted; the first is generally made of such cotton as is put in candles, of several sizes, from 1 to six threads thick, according to the pipes it is designed for. The ingredients are, cotton 1lb. 12 oz. salt-petre 1lb. 8 oz. spirits of wine 2 quarts, water 2 quarts, isinglass 3 gills, and mealed powder 10lb. It is then taken out hot, and laid in a trough where some mealed powder, moistened with spirits of wine, is thoroughly wrought into the cotton. This done, they are taken out separately, and drawn through mealed powder, and hung upon a line to dry.—The composition for the second is, worsted 10 oz. mealed powder 10lb. spirits of wine 3 pints, and white-wine vinegar 3 pints.

LABORER, *Fr.* literally, to remove earth with a plough, spade, &c. Figuratively, to belabor, which according to Johnston, is to beat, thump, &c. The French use it, in a military sense, to express any direct and concentrated effort which is made to destroy a fortification.

LABORER *un rampart*, signifies to bring several pieces of ordnance discharged from two oblique directions to bear upon one centre. Shells and hollow balls are generally used on these occasions, and the chief design is to second the operations of the miner in some particular part from whence the explosion is to take place.

Laborer likewise applies to the working of a bomb or shell, which excavates, ploughs up, and scatters the earth about wherever it bursts.

LACAY *or* LAQUET, *Fr.* An old French militia was formerly so called. The name is found among the public documents which were kept by the treasurers belonging to the dukes of Britanny, in the fifteenth century.

LACE, the uniform of regiments is distinguishable often by the lace and button.

LACERNA, *Fr.* a garment which was worn by the ancients. It was made of woollen stuff, and was only worn by men; originally indeed by those alone that were of a military profession. It was usually thrown over the toga, and sometimes indeed over the tunica. It may not improperly be considered as the surtout or great coat of the ancients, with this difference, that there was a winter lacernum and a summer one.

The lacerna was adopted by the Romans towards the close of their republic. Even as late down as the days of Cicero it was unknown amongst them, or if known, censured as a mark of disgraceful effeminacy. During the civil wars that occurred in the triumvirate of Augustus, Lepidus, and Antony, the lacerna became familiar to the people, and by degrees was adopted as common apparel, by the senators and knights of Rome, until the reigns of Gratian, Valentinian, and Theodosius, who enjoined the senators not to wear it.

The lacerna is the same as the *chlamys* and the *burrhus*.

Un LACHE, *Fr.* A familiar phrase among the French to signify a coward, &c.

LACHER, *Fr.* to go off. *Son pistolet, ou son fusil, vint à lâcher;* his pistol, or his musquet, went off of itself.

LACHER *pied*, Fr. to run away.

LACHER *un prisonnier*, Fr. to let a prisoner escape, or go away unmolested.

LACHER *un coup*, in speaking of fire arms, signifies to discharge a pistol or musquet. *Il lui lâcha un coup de pistolet dans la tête;* he lodged a bullet in his head. *Le vaisseau lâcha toute sa bordée à la portée du mousquet;* the ship fired a whole broadside within musquet shot.

LACHETE, *Fr.* An opprobrious term which is frequently used among the French, and is applied in all instances of cowardice, want of spirit, or dishonorable conduct. One of their writers emphatically observes, that in a military sense of the word it cannot be misunderstood, as the least imputation of cowardice or want of spirit, is sufficient to destroy the entire character and fame of every officer and soldier whom it may affect. As it is the direct opposite to courage, the person who enters into the profession of arms, should weigh well within himself whether he possesses that indispensible quality, which is above all the temptations of pleasure or the effeminacy of life, and is only alive to the glorious impulse of military animation. He only, in fact, is fit for arms, whose spirit is superior to every sordid view, who knows no personal fear, and who can encounter the greatest difficulties and dangers with an inward placidity of soul, and an outward indifference to life. In order to illustrate this article, we shall quote some ancient and modern instances of that species of cowardice or *lâcheté*, which affects the military character.

Euripidas, chief of the Eléans, having imprudently advanced too far into a long and narrow defile, and learning, that Philip of Macedon was on this march to block up the passage through which he had entered, instead of manfully waiting the issue of an engagement, abandoned his army, in the most cowardly manner. It does not appear says the chevalier Folard, that Euripidas possessed those talents which are necessary to form a great general; for instead of meanly stealing off by a bye road and leaving his army to its fate, he would have remained at its head, and either have fought his way through, honorably have capitulated, or have died combating with his men.

Base and inglorious as this conduct of Euripidas most unquestionably was, the behaviour of Perseus king of the Macedonians exceeded it in cowardice and degradation. This infamous prince did not wait to be visited by misfortune or to lose a battle; he had, on the contrary, obtained a signal victory over the Romans, and when Paulus Emilius marched against him, the army he commanded was not inferior to that of his opponent in discipline and valor, and had the advantage in point of numbers. Yet, strange to relate! the engagement was no sooner begun, than he rode off full gallop, and repaired to the town of Pydnus, under the flimsy pretext of sacrificing to the God Hercules; as if Hercules, to use Plutarch's expression, was the deity to whom the prayers and offerings of *Cowards* were to be preferred!

The English duke of York on two occasions during his command in the Netherlands, displayed this *lâcheté*.

Mark Antony on the other hand, after having acquired the reputation of a brave and distinguished general, submitted to the allurements of sensual gratification, and buried all his glory in the meretricious embraces of an Egyptian strumpet. We have had a striking instance, during the present war, of the superiority which a real military thirst for glory will always have over private indulgences. When the French army was very critically situated in Germany, general Hoche who commanded it, became exposed one evening to the allurements of a most beautiful woman, who by design or accident got placed near the general at a public supper. Aware of the weakness of human nature, and full of his own glory, as well as conscious of the critical state of the army entrusted to his care, he suddenly rose, ordered his horses, and left the place at midnight.

We might enumerate a variety of cases in which the greatest heroes have fallen victims to human weakness; and few alas! in which a sense of public duty and a regard for the opinion of posterity have got the ascendancy. History, however, saves us that trouble, and we shall remain satisfied with having explained under the word *Lâchete*, what we conceive disgraceful in an officer or soldier, who suffers personal fear, passion, or interest to get the better of public character.

La trahison est une lâcheté; treason is infamous in its nature.

LACUNETTE, *Fr.* a term in fortification. A small fossé or ditch was formerly so called. The word *Cunette* has since been adopted.

LADAVEE, *Ind.* A release or acquittance from any demand.

LADLES, *in gunnery*, are made of copper, to hold the powder for loading guns, with long handles of wood, when cartridges are not used.

LADLES, in *laboratory business*, are very small, made of copper, with short handles of wood, used in supplying the fuses of shells, or any other composition, to fill the cases of sky-rockets, &c.—There is another kind of ladle which is used to carry red hot shot. It is made of iron, having a ring in the middle to hold the shot, from which 2 handles proceed from opposite sides of the ring.

Scaling-LADDERS (*échelles de siege*, Fr.) are used in scaling when a place is to be taken by surprise. They are made several ways: sometimes of flat staves, so as to move about their pins and shut like a parallel ruler, for conveniently carrying them: the French make them of several pieces, so as to be joined together, and to be capable of any necessary length: sometimes they are made of single ropes, knotted at proper distances, with iron hook at each end, one to fasten them upon the wall above, and the other in the ground; and sometimes they are made with 2 ropes, and staves between them, to keep the ropes at a proper distance, and to tread upon. When they are used in the action of scaling walls, they ought to be rather too long than too short, and to be given in charge only to the stoutest of the detachment. The soldiers should carry these ladders with the left arm passed through the second step, taking care to hold them upright close to their sides, and very short below, to prevent any accident in leaping into the ditch.

The first rank of each division, provided with ladders, should set out with the rest at the signal, marching resolutely with their firelocks slung, to jump into the ditch: when they are arrived, they should apply their ladders against the parapet, observing to place them towards the salient angles rather than the middle of the curtain, because the enemy has less force there. Care must be taken to place the ladders within a foot of each other, and not to give them too much nor too little slope, so that they may not be overturned, or broken with the weight of the soldiers mounting upon them.

The ladders being applied, they who have carried them, and they who come after should mount up, and rush upon the enemy sword in hand: if he who goes first, happens to be overturned, the next should take care not to be thrown down by his comrade; but on the contrary, immediately mount himself so as not to give the enemy time to load his piece.

As the soldiers who mount first may be easily tumbled over, and their fall may cause the attack to fail, it would perhaps be right to protect their breasts with the fore-parts of cuirasses; because, if they can penetrate, the rest may easily follow.

The success of an attack by scaling is infallible, if they mount the 4 sides at once, and take care to shower a number of grenades among the enemy, especially when supported by some grenadiers and picquets, who divide the attention and share the fire of the enemy.

The ingenious colonel Congreve of the British artillery, has very much improved upon the construction of these ladders. As the height of different works vary, and the ladders, when too long, afford purchase to the besieged, he has contrived a set of ladders having an iron staple at the lower part of each stem, so that if 1, 2, or 3, should be found insufficient to reach the top of the work, another might with facility be joined to the lowest, and that be pushed up until a sufficient length could be obtained.

LAITON, *sometimes written* LETTON, *Fr.* a metallic composition which is made of copper and the lapis calaminaris; a soft brass.

LALA, *Ind.* lord; sir; master; worship.

LAMA, *Ind.* A chief priest, whose followers suppose him immortal. They imagine, that on the dissolution of his mortal frame, his spirit enters the body of a new born child. He is also monarch of Thibet.

LAMBREQUINS, *Fr*, small mantles or ribands which were twisted round the hood or top of a helmet at the bottom of the crest, and kept the whole together. These ornaments fell into disuse when the helmet was laid aside. In former times, when the cavaliers or persons who wore them, wished to take breath, and to be relieved from the weight of the helmet, they untied the mantles, and let them float about their shoulders suspended from the hood only. Hence the appellation of *valets* as hanging behind.

LAMPION *à parapet*, Fr. a lamp generally used on the parapet or elsewhere in a besieged place. It is a small iron vessel filled with pitch and tar which the garrison lighted as occasions required. The lampion is sometimes confounded with the *réchaud* de rampart, or chaffing dish, which is used upon the rampart on similar occasions.

LANCE, *lance*, Fr. This offensive weapon was much used by the French in former times, particularly by that class of military gentlemen called chevaliers, and by the gendarmes. It has also been used by the English and other nations. Lances were made of ash, being a wood of a tough quality and not so liable to break as another species. Before the reign of Philip de Valois, the chevaliers and gens darmes fought on foot, armed with lances only, both in battles and at sieges. On these occasions they shortened their lances, which were then said to be retaillées or cut again. A sort of bannerol or streamer hung from each lance, and was attached to the bottom of the sharp iron or blade which was fixed to the pole. Lances were used in this manner as far back as during the crusades.

Rompre la Lance, *Fr.* to break a lance. This was a phrase peculiar to any assault which was given at tilts or tournaments, and signified to engage or come to close combat.

Rompre une Lance, according to the last edition of the Dictionnaire de l'Académie Francoise, likewise means in a familiar and proverbial sense, to defend another against the attacks of an adversary. The French say: *rompre des lances pour quelqu'un*, to defend another: *rompre une lance avec quelqu'un*, to enter into any warm dispute or controversy with another.

Main de la Lance, *Fr.* A figurative expression, to signify the right hand of a cavalier or horseman.

Lance *de drapeau*, Fr. The staff to which regimental colors are attached.

Lances *levées*, Fr. uplifted lances, indicated that the enemy was beaten, and that the chevaliers or gendarmes should close the day by giving a final blow to the disordered ranks. The use of the lance was discontinued in France sometime before the compagnies d'ordonnance or independent companies were reduced and formed into the gendarmerie. Little or no use indeed, was made of them, during the reign of Henry IV. But the Spaniards still retained that weapon as low down as the days of Louis XIII. and when arms were too scarce at the opening of the French revolution, the *pike* or *lance* was resorted to with great success.

Lance, *Fr.* means likewise an iron rod which is fixed across the earthen mould of a shell, and which keeps it suspended in the air when it is cast. As soon as the bomb or shell is formed, this rod must be broken, and carefully taken out with instruments made for that purpose. Shells ought to be scrupulously examined with respect to this article, as they could not be charged, were the lance or any part of it to remain within. *Lance* is also an instrument which conveys the charge of a piece of ordnance and forces it home into the bore. See Rammer of a Gun.

Lance *à feu*, Fr. a squib. A species of artificial fire work which is made in the shape of a fuse, and is used for various purposes. According to the author of *Œuvres Militaires*, tom. II. p. 208, the composition of the *lance à feu* consists of three parts of the best refined salt-petre, two parts of flour of sulphur, and two of antimony; the whole being pounded and mixed together.

The chief use which is made of the *lance à feu* is to throw occasional light across the platform, whilst artificial fire-works are preparing. They likewise serve to set fire to fuses, as they can be taken hold of without danger.

Lance *à feu puant*, Fr. Stink-fire lances prepared in the same manner that stink-pots are, and particularly useful to miners. When a miner or sapper has so far penetrated towards the enemy as to hear the voices of persons in any place contiguous to his own excavation, he first of all bores a hole with his probe, then fires off several pistols through the aperture, and lastly forces in a *lance à feu puant*, taking care to close up the hole on his side to prevent the smoke from returning towards himself. The exhalation and stinking hot vapour which issue from the lance, and remain confined on the side of the enemy, infest the air so much, that it is impossible to approach the quarter for three or four days. Sometimes, indeed, they have had so instantaneous an effect, that in order to save their lives, miners, who would persevere, have been dragged out by the legs in an apparent state of suffocation.

Lance *de feu*, Fr. a species of squib which is used by the garrison of a besieged town against a scaling party.

Lance-*Gaie*, Fr. an offensive weapon formerly so called in France.

Lance *Spezzate*, Fr. a reduced officer. In former times it signified a dismounted gendarme who was appointed to an infantry corps with some emolument attached to his situation. The word anspessade, a non-commissioned officer who acts subordinate to the corporal, is corrupted from this term. Besides the three hundred Swiss guards which were constantly attached to the palace, the Pope maintained twelve lance-spezzates or reduced officers.

LANDING *Troops*. See Debarkation, and Regulations.

LAND FORCES, troops whose system is calculated for land service only, in contradistinction to seamen and mariners. All the land forces of Great Britain are liable to serve on board the navy. Indeed the marine establishment as a military corps is an anomaly, kept up only for patronage; the proper establishment of soldiers for sea service should be by detachments from the infantry, according to a roster.

LANE, in a *military sense*, is where men are drawn up in two ranks facing one another, as in a street, for any great person to pass through, or sometimes for a soldier to run the gantelope.

LANGUE, *Fr.* a term peculiarly connected with the late military order of Malta. The eight nations of which this celebrated order consisted, were distinguished by the appellation of *Langue* or tongues. There were three of this description in France, viz. *la Langue de France, la Langue de Provence, et la Langue d'Auvergne;* two in Spain, viz. *la Langue d'Arragon, et la Langue de Castile;* and three indiscriminate ones, viz. *la Langue d'Italia, la Langue d'Allemagne, et la Langue d'Angleterre.* The head of each langue was called *Grand Prieur*, or *Grand Prior.*

Langue *de terre*, Fr. a tongue of land.

LANSQUENETS, *Fr.* the German mercenaries which Charles VII. of France first added to his infantry, were so called. They continued in the French service until the reign of Francis I. who consolidated all the foot establishments into a certain number of legions; they were so called from the lance or pike which was their weapon.

LANS-PESATE, } a soldier that
LANCE-PESADE, } does duty as a corporal, especially on guards and detachments; a lance corporal.

LANTERN, } commonly called
LANTHORN, } Muscovy lanterns, being a kind of dark lantherns, used in the field, when dark, to light the gunners in the camp to prepare the stores, &c.

LANTERNE, *Fr.* A word used in the French navy to signify any wooden case or box in which cartridges are brought out of the powder magazine for the purpose of serving the guns.

Lanterne, *Fr.* it is sometimes called *cuiller* or ladle, and serves to convey gunpowder into a piece of ordnance. It is made of copper, and resembles a round spoon or ladle, which is fixed to a long pole.

Lanterne, *a mitrailles*, Fr. A round piece of concave wood, something like a box, which is filled with case shot, and is fired from a piece of ordnance when the enemy is near.

LASCARS, or *Laskars*. The native seamen of India; the native gunners are likewise so called. They are employed to tend and serve the artillery on shore, and are attached to corps as pioneers or tent-pitchers.

LASHING-RINGS, in *artillery*, with hoops, fixed on the side-pieces of travelling carriages, to lash the tarpauling, as also to tie the spunge, rammer, and ladle. See Carriage.

LATH, in *building*, a long, thin, and narrow slip of wood, nailed to the rafters of a roof or ceiling, in order to fasten the covering. Laths are distinguished into three kinds, according to the different kinds of wood of which they are made, viz. heart of oak, sap-laths, deal-laths, &c.

LATHE, a machine for turning wood or metal.

LATHE *Reeve*, an officer during the Saxon government, who held a certain jurisdiction over that part of the country which was called a tithing.

LATTIE, an Indian term for warehouse.

LATITUDE, in *geography*, the distance of any place from the equator, measured in degrees, minutes, seconds, &c. upon the meridian of that place: and is either north or south according as the place is situated either on the north or south side of the equator.

LATRINES, *Fr.* privies or holes which are dug at the back of a camp for the convenience of soldiers. The pioneers are generally employed to make them.

LAVER, LAVIS, *Fr.* a wash, or superficial stain or color; it is particularly made use of in all sketches, plans, and drawings; the different intervals or spaces of which are slightly shaded or colored. This kind of painting is stiled *lavis*, or water-coloring. The difference between miniature painting and washing or drawing in water colors, consists in this, that the former is dotted and worked up into light and shade; the latter is barely spread with a brush. There are, besides, other marks of distinction; those colors which more immediately resemble nature, are always used in the lavis or water-painting; the spaces that represent a fosse or ditch, which is supposed to be full of water, must be distinguished by a sky blue; brick and tiles by red; roads by a dun color, and trees or turf, &c. by green.

LAVIS, *Fr.* generally means every sort of simple color which is diluted with water.

LAVURE, *Fr.* the grains, dust, or detached pieces of metal which fall in casting cannon.

LAUREL, a shrub which is always green.

To be crowned with laurels, a figurative expression, signifying that a man has atchieved glorious actions, and is entitled to marks of public distinction. In ancient times heroes and conquerors had their heads encircled with a wreath of laurels.

LAURES, gold coins which were issued from the English mint in 1619, representing the head of king James I. encircled with laurels.

LAW *of arms*, certain acknowleged rules, regulations, and precepts, which relate to war, and are observed by all civilized nations.

LAWS *of arms* are likewise certain precepts shewing how to proclaim war, to attack the enemy, and to punish offenders in the camp; also restricting the contending parties from certain cruelties, &c.

LAW *military*. The persons who are subject to military law, and are amenable to trial by court martial, are in the terms of military law, all persons commissioned or in pay, as officers, non-commissioned officers, private soldiers, and all followers of an army. Half pay officers are not subject to military law, whilst civil justice can be resorted to.

LAWS *relating to martial affairs.* The following laws existed during the most flourishing state of the Roman commonwealth. We insert them in this place as by no means being inapplicable to the present times.

Secreta Lex Militaris, which was promulgated about the year 411, ordained, that no soldier's name which had been entered in the muster roll, should be struck out, unless by the party's consent; and that no person who had been military tribune should execute the office of *ductor ordinum*. *Sempronia lex*, which appeared in the year 630, ordained, that the soldiers should receive their pay gratis at the public charge, without any diminution of their ordinary pay; and that none should be obliged to serve in the army, who was not full seventeen years old. *Sulpicia lex*, which was made in 665, ordained, that the chief command in the Mithridatic war, which was then enjoyed by L. Sylla, should be taken from him, and conferred on C. Marius.

Gabinia lex appeared in 685, ordaining that a commission should be granted to Cn. Pompey, for the management of the war against the pirates for three years, with this particular clause, that upon all the sea on this side Hercules's pillars, and in the maritime provinces, as far as 400 stadia from the sea, he should be empowered to command kings, governors, and states to supply him with all the necessaries in his expedition.

Manilia lex, published in 687, ordained, that all the forces of Lucullus, and the province under his government, should be given to Pompey; together with Bithynia, which was under the command of Glabrio, and that he should forthwith make war upon Mithridates, retaining still the same naval forces, and the sovereignty of the seas as before.

Maria Parcia lex appeared in 1691, ordaining that a penalty should be inflicted on such commanders as wrote falsely to the senate, about the number of the slain, on the enemy's side, and of their own party; and that they should be obliged, when they first entered the city, to take a solemn oath before the quæstors that the number which they returned, was true, according to the best computation. See Kennett's Ant. of Rome, page 168.

It will be seen by these laws, particularly by the last, that the most minute military operation was subservient to the senate. The French seem, in this respect, to have imitated the Romans very closely, but they do not appear to have adhered, so strictly as they might, to the law which regards the loss of men, nor are their neighbors more correct.

LAWS *of Nations*, such general rules as regard the embassies, reception and entertainment of strangers, intercourse of merchants, exchange of prisoners, suspension of arms, &c.

LAW *of marque*, or *letters of marque*, that by which persons take the goods or shipping of the party that has wronged them, as in time of war, whenever they can take them within their precincts.

LAWS *of the United States*, regulating the military establishment; these are of two descriptions, the first relates to the regular force; the second to the militia, the latter of which is mere print and paper, without consistency, efficacy, or force; and calculated rather to discourage than assure military knowlege in the militia. The following are the laws regulating the *military establishment.*

Sec. I. That from and after the passing of this act, the following shall be the rules and articles by which the armies of the United States shall be governed.

Art. 1. Every officer now in the army of the United States, shall, in six months from the passing of this act, and every officer who shall hereafter be appointed, shall before he enters on the duties of his office, subscribe these rules and regulations.

Art. 2. It is earnestly recommended to all officers and soldiers diligently to attend divine service; and all officers who shall behave indecently or irreverently at any place of divine worship, shall, if commissioned officers, be brought before a general court-martial, there to be publicly and severely reprimanded by the president; if non-commissioned officers or soldiers, every person so offending shall, for his first offence, forfeit *one sixth of a dollar*, to be deducted out of his next pay; for the second offence, he shall not only forfeit a like sum, but be confined twenty-four hours: and for every like offence shall suffer and pay in like manner; which money, so forfeited, shall be applied by the captain or senior officer of the troop or company, to the use of the sick soldiers of the company or troop to which the offender belongs.

Art. 3. Any non-commissioned officer or soldier who shall use any profane oath or execration shall incur the penalties expressed in the foregoing article, and a commissioned officer shall forfeit and pay for each and every such offence one dollar, to be applied as in the preceding article.

Art. 4. Every chaplain commissioned in the army or armies of the United States, who shall absent himself from the duties assigned him (except in cases of sickness or leave of absence) shall, on conviction thereof before a court-martial, be fined not exceeding one month's pay, besides the loss of his pay during his absence; or be discharged, as the said court-martial shall judge proper.

Art 5. Any officer or soldier who shall use contemptuous or disrespectful words against the president of the United States, against the vice president thereof, against the congress of the United States, or against the chief magistrate or legislature of any of the United States in which he may be quartered, if a commissioned officer, shall be cashiered, or otherwise punished as a court-martial shall direct; if a non-commissioned officer or soldier, he shall suffer such punishment as shall be inflicted on him by the sentence of a court-martial.

Art 6 Any officer or soldier who shall behave himself with contempt or disrespect towards his commanding officer, shall be punished according to the nature of his offence, by the judgment of a court-martial.

Art. 7. Any officer or soldier who shall begin, exercise, cause, or join in any mutiny or sedition in any troop or company in the service of the United States, or in any party, post, detachment, or guard, shall suffer death, or such other punishment as by a court-martial shall be inflicted.

Art. 8. Any officer, non-commissioned officer, or soldier, who being present at any mutiny or sedition, does not use his utmost endeavor to suppress the same, or coming to the knowlege of any intended mutiny, does not without delay, give information thereof to his commanding officer, shall be punished by the sentence of a court-martial with death or otherwise, according to the nature of his offence.

Art. 9. Any officer or soldier who shall strike his superior officer, or draw or lift up any weapon, or offer any violence against him, being in the execution of his office, on any pretence whatsoever, or shall disobey any lawful command of his superior officer, shall suffer death, or such other punishment as shall, according to the nature of his offence, be inflicted upon him by the sentence of a court-martial.

Art. 10. Every non-commissioned officer, or soldier, who shall inlist himself in the service of the United States, shall, at the time of his so inlisting, or within six days afterwards, have the articles for the government of the armies of the United States, read to him, and shall, by the officer who inlisted him, or by the commanding officer of the troop or company into which he was inlisted, be taken before the next justice of the peace, or chief magistrate of any city or town corporate, not being an officer of the army, or where recourse cannot be had to the civil magistrate, before the judge advocate, and, in his presence, shall take the following oath or affirmation: "I A. B. do solemnly swear, or affirm, (as the case may be) that I will bear true allegiance to the United States of America, and that I will serve them honestly and faithfully against all their enemies, or opposers, whatsoever, and observe and obey the orders of the president of the United States, and the orders of the officers appointed over me, according to the rules and articles for the government of the armies of the United States." Which justice, magistrate, or judge advocate is to give the officer a certificate, signifying that the man inlisted, did take the said oath, or affirmation.

Art. 11. After a non-commissioned officer or soldier, shall have been duly inlisted and sworn, he shall not be dismissed the service without a discharge in writing; and no discharge granted to him shall be sufficient, which is not signed by a field officer of the regiment to which he belongs, or commanding officer, where no field officer of the regiment is present; and no discharge shall be given to a non-commissioned officer or soldier, before his term of service has expired, but by order of the president, the secretary of war, the commanding officer of a department, or the sentence of a general court-martial, nor shall a commissioned officer be discharged the service, but by order of the president of the United States, or by sentence of a general court-martial.

Art. 12. Every colonel, or other officer commanding a regiment, troop, or company, and actually quartered with it, may give furloughs to non-commissioned officers or soldiers, in such numbers, and for so long a time as he shall judge to be most consistent with the good of the service; and a captain or other inferior officer commanding a troop or company, or in any garrison, fort or barrack of the United States, (his field officer being absent), may give furloughs to non-commissioned officers or soldiers, for a time not exceeding twenty days in six months, but not to more than two persons to be absent at the same time, excepting some extraordinary occasion should require it.

Art. 13. At every muster, the commanding officer of each regiment, troop, or company there present, shall give to the commissary of musters, or other officer who musters the said regiment, troop, or company, certificates signed by himself, signifying how long such officers, as shall not appear at the said muster, have been absent, and the reason of their absence. In like manner, the commanding officer of every troop, or company, shall give certificates, signifying the reasons of the absence of the non-commissioned officers and private soldiers, which reasons, and time of absence, shall be inserted in the muster-rolls opposite the name of the respective absent officers and soldiers. The certificates shall, together with the muster-rolls, be remitted by the commissary of musters, or other officer mustering, to the department of war as speedily as the distance of the place will admit.

Art. 14. Every officer who shall be convicted, before a general court-martial, of having signed a false certificate, relating to the absence of either officer or private soldier, or relative to his or their pay, shall be cashiered.

Art. 15. Every officer who shall knowingly make a false muster of man or horse, and every officer or commissary of musters, who shall willingly sign, direct or allow the signing of musters-rolls, wherein such false muster is contained, shall, upon proof made thereof by two witnesses, before a general court-martial, be cashiered, and shall be thereby utterly disabled to have or hold any office or employment in the service of the United States.

Art. 16. Any commissary of musters or other officer, who shall be convicted of having taken money or other thing, by way of gratification, on the mustering any regiment, troop or company, or on the signing muster-rolls, shall be displaced from his office, and shall be thereby utterly disabled to have or hold any office or employment in the service of the United States.

Art. 17. Any officer who shall presume to muster a person as a soldier, who is not a soldier, shall be deemed guilty of having made a false muster, and shall suffer accordingly.

Art. 18. Every officer who shall knowingly make a false return to the department of war, or to any of his superior officers, authorized to call for such returns, of the state of the regiment, troop, or company, or garrison, under his command; or of the arms, ammunition, clothing, or other stores thereunto belonging, shall on conviction thereof before a court-martial, be cashiered.

Art. 19. The commanding officer of every regiment, troop, or independent company, or garrison of the United States, shall in the beginning of every month, remit through the proper channels, to the department of war, an exact return of the regiment, troop, independent company, or garrison, under his command, specifying the names of officers then absent from their posts, and the reasons for, and the time of their absence. And any officer who shall be convicted of having, through neglect or design, omitted sending such returns, shall be punished according to the nature of his crime, by the judgment of a general court-martial.

Art. 20. All officers and soldiers, who have received pay, or have been duly inlisted in the service of the United States, and shall be convicted of having deserted the same, shall suffer death, or such other punishment as by sentence of a court-martial shall be inflicted.

Art. 21. Any non-commissioned officer or soldier, who shall, without leave from his commanding officer, absent himself from his troop, company, or detachment, shall, upon being convicted thereof, be punished according to the nature of his offence at the discretion of a court-martial.

Art. 22. No non-commissioned officer or soldier shall inlist himself in any other regiment, troop, or company, without a regular discharge from the regiment, troop, or company, in which he last served, on the penalty of being reputed a deserter, and suffering accordingly. And in case any officer shall knowingly receive and entertain such non-commissioned officer or soldier, or shall not, after his being discovered to be a deserter, immediately confine him, and give notice thereof to the corps in which he last served, the said officer shall by a court-martial be cashiered.

Art. 23. Any officer or soldier, who shall be convicted of having advised or persuaded any other officer or soldier, to desert the service of the United States, shall suffer death, or such other punishment as shall be inflicted upon him by the sentence of a court martial.

Art. 24. No officer or soldier shall use any reproachful or provoking speeches or gestures to another, upon pain, if an officer, of being put in arrest; if a soldier, confined, and of asking pardon of the party offended, in the presence of his commanding officer.

Art. 25. No officer or soldier shall send a challenge to another officer or soldier, to fight a duel, or accept a challenge, if sent; upon pain, if a commissioned officer of being cashiered; if a non-commissioned officer or soldier, of suffering corporeal punishment at the discretion of a court-martial.

Art. 26. If any commissioned or non-commissioned officer commanding a guard, shall knowingly or willingly suffer any person whatsoever to go forth to fight a duel, he shall be punished as a challenger; and all seconds, promoters, and carriers of challenges, in order to duels, shall be deemed principals, and be punished accordingly. And it shall be the duty of every officer, commanding an army, regiment, company, post, or detachment, who is knowing to a challenge being given, or accepted, by any officer, non commissioned officer, or soldier, under his command, or has reason to believe the same to be the case, immediately to arrest and bring to trial such offender.

Art. 27. All officers, of what condition soever, have power to part and quell all quarrels, frays, and disorders, though the persons concerned should belong to another regiment, troop, or company; and either to order officers into arrest, or non-commissioned officers or soldiers into confinement, until their proper superior officers shall be acquainted therewith; and whosoever shall refuse to obey such officer, (though of an inferior rank) or shall draw his sword upon him, shall be punished at the discretion of a general court-martial.

Art. 28. Any officer or soldier, who shall upbraid another for refusing a challenge, shall himself be punished as a challenger, and all officers and soldiers are hereby discharged from any disgrace or opinion of disadvantage, which might arise from their having refused to accept of challenges, as they will only have acted in obedience to the laws, and done their duty as good soldiers, who subject themselves to discipline.

Art. 29. No suttler shall be permitted to sell any kind of liquors or victuals, or to keep their houses or shops open for the entertainment of soldiers, after nine at night, or before the beating of the reveilles, or upon Sundays, during divine service or sermon, on the penalty of being dismissed from all future suttling.

Art. 30. All officers commanding in the field, forts, barracks, or garrisons of the United States, are hereby required to see that the persons permitted to suttle, shall supply the soldiers with good and wholesome provisions, or other articles, at a reasonable price, as they shall be answerable for their neglect.

Art. 31. No officer commanding in any of the garrisons, forts, or barracks of the United States, shall exact exorbitant prices for houses or stalls let out to suttlers, or connive at the like exactions in others; nor by his own authority, and for his private advantage, lay any duty or imposition upon, or be interested in, the sale of any victuals, liquors, or other necessaries of life, brought into the garrison, fort, or barracks, for the use of the soldiers, on the penalty of being discharged from the service.

Art. 32. Every officer commanding in quarters, garrisons, or on the march, shall keep good order, and to the utmost of his power, redress all abuses or disorders, which may be committed by any officer or soldier under his command; if upon complaint made to him of officers or soldiers beating, or otherwise ill treating any person, of disturbing fairs, or markets, or of committing any kind of riots, to the disquieting of the citizens of the United States, he, the said commander, who shall refuse or omit to see justice done to the offender or offenders, and reparation made to the party or parties injured, as far as part of the offender's pay shall enable him or them, shall, upon proof thereof, be cashiered or otherwise punished as a general court-martial shall direct.

Art. 33. When any commissioned officer or soldier, shall be accused of a capital crime, or of having used violence, or committed any offence against the persons or property of any citizen of any of the United States, such as is punishable by the known laws of the land, the commanding officer, and officers of every regiment, troop, or company, to which the person, or persons, so accused, shall belong, are hereby required, upon application duly made by, or in behalf of the party or parties injured, to use their utmost endeavors to deliver over such accused person, or persons, to the civil magistrate, and likewise to be aiding and assisting to the officers of justice in apprehending and securing the person or persons so accused in order to bring him or them to trial. If any commanding officer, or officers, shall wilfully neglect, or shall refuse, upon the application aforesaid, to deliver over such accused person, or persons, to the civil magistrates, or to be aiding and assisting to the officers of justice in apprehending such person, or persons, the officer, or officers, so offending, shall be cashiered.

Art. 34. If any officer shall think himself wronged by his colonel, or the commanding officer of the regiment, and shall, upon due application being made to him, be refused redress, he may complain to the general, commanding in the state or territory where such regiment shall be stationed, in order to obtain justice; who is hereby required to examine into the said complaint, and take proper measures for redressing the wrong complained of, and transmit as soon as possible, to the department of war, a true state of such complaint, with the proceedings had thereon.

Art. 35. If any inferior officer or soldier, shall think himself wronged by his captain, or other officer, he is to complain thereof to the commanding officer of the regiment, who is hereby required to summon a regimental court-martial, for the doing justice to the complainant; from which regimental court martial, either party may, if he thinks himself still aggrieved, appeal to a general court-martial. But if, upon a second hearing, the appeal shall appear vexatious and groundless, the person so appealing, shall be punished at the discretion of the said court-martial.

Art. 36. Any commissioned officer, store keeper, or commissary, who shall be convicted at a general court-martial, of having sold, without a proper order for that purpose, embezzled, misapplied, or wilfully, or through neglect, suffered any of the provisions, forage, arms, clothing, ammunition, or other military stores, belonging to the United States, to be spoiled, or damaged, shall, at his own expence, make good the loss, or damage, and shall moreover, forfeit all his pay, and be dismissed from the service.

Art. 37. Any non-commissioned officer, or soldier, who shall be convicted, at a regimental court-martial, of having sold, or designedly, or through neglect, wasted the ammunition delivered out to him, to be employed in the service of the United States, shall be punished at the discretion of such court.

Art. 38. Every non-commissioned officer or soldier, who shall be convicted before a court-martial, of having sold, lost, or spoiled, through neglect, his horse, arms, clothes, or accoutrements, shall undergo such weekly stoppages (not exceeding the half of his pay) as such court martial shall judge sufficient, for repairing the loss or damage; and shall suffer confinement or such other corporeal punishment as his crime shall deserve.

Art. 39. Every officer, who shall be convicted before a court-martial, of having embezzled, or misapplied any money, with which he may have been entrusted for the payment of the men under his command, or for inlisting men into the service, or for other purposes, if a commissioned officer, shall be cashiered, and compelled to refund the money; if a non-commissioned officer, shall be reduced to the ranks, be put under stoppages until the money be made good, and suffer such corporeal punishment as such court-martial shall direct.

Art. 40. Every captain of a troop, or company, is charged with the arms, accoutrements, ammunition, clothing, or other warlike stores belonging to the troop, or company under his command, which he is to be accountable for to his colonel, in case of their being lost, spoiled, or damaged, not by unavoidable accidents, or on actual service.

Art. 41. All non-commissioned officers and soldiers, who shall be found one mile from the camp, without leave, in writing, from their commanding officer, shall suffer such punishment as shall be inflicted upon them by the sentence of a court-martial.

Art. 42. No officer, or soldier, shall be out of his quarters, garrison, or camp, without leave from his superior officer, upon penalty of being punished according to the nature of his offence, by the sentence of a court-martial.

Art. 43. Every non-commissioned officer and soldier shall retire to his quarters or tent, at the beating of the retreat; in default of which he shall be punished according to the nature of his offence.

Art. 44. No officer, non-commissioned officer, or soldier, shall fail in repairing, at the time fixed, to the place of parade, of exercise, or other rendezvous, appointed by his commanding officer, if not prevented by sickness, or some other evident necessity; or shall go from the said place of rendezvous, without leave from his commanding officer, before he shall be regularly dismissed or relieved, on the penalty of being punished according to the nature of his offence, by the sentence of a court-martial.

Art. 45. Any commissioned officer who shall be found drunk on his guard, party, or other duty, shall be cashiered. Any non-commissioned officer or soldier so offending, shall suffer such corporeal punishment as shall be inflicted by the sentence of a court-martial

Art. 46. Any centinel who shall be found sleeping upon his post, or shall leave it before he shall be regularly relieved, shall suffer death, or such other punishment as shall be inflicted by the sentence of a court-martial.

Art. 47. No soldier belonging to any regiment, troop, or company, shall hire another to do his duty for him, or be excused from duty, but in cases of sickness, disability, or leave of absence; and every such soldier found guilty of hiring his duty, as also the party so hired to do another's duty, shall be punished at the discretion of a regimental court-martial.

Art. 48. And every non-commissioned officer conniving at such hiring of duty aforesaid, shall be reduced; and every commissioned officer, knowing and allowing such ill practices in the service, shall be punished by the judgment of a general court-martial.

Art. 49. Any officer belonging to the service of the United States, who, by discharging of fire arms, drawing of swords, beating of drums, or by any other means whatsoever, shall occasion false alarms in camp, garrison, or quarters, shall suffer death, or such other punishment as shall be ordered by the sentence of a genaral court-martial.

Art. 50. Any officer or soldier, who shall, without urgent necessity, or without the leave of his superior officer, quit his guard, platoon, or division, shall be punished according to the nature of his offence, by the sentence of a court-martial.

Art. 51. No officer or soldier shall do violence to any persons who brings provisions or other necessaries to the camp, garrison, or quarters, of the forces of the United States, employed in any parts out of the said states, upon pain of death, or such other punishment as a court-martial shall direct.

Art. 52. Any officer or soldier, who shall misbehave himself before the enemy, run away, or shamefully abandon any fort, post, or guard, which he or they may be commanded to defend, or speak words inducing others to do the like; or shall cast away his arms and ammunition, or who shall quit his post or colors to plunder and pillage, every such offender being duly convicted thereof, shall suffer death or such other punishment as shall be ordered by the sentence of a general court-martial.

Art. 53. Any person belonging to the armies of the United States, who shall make known the watch-word to any person who is not entitled to receive it, according to the rules and discipline of war, or shall presume to give a parole or watchword, different from what he received, shall suffer death, or such other punishment as shall be ordered by the sentence of a general court-martial.

Art. 54. All officers and soldiers are to behave themselves orderly in quarters, and on their march; and whosoever shall commit any waste, or spoil, either in walks of trees, parks, warrens, fish ponds, houses, or gardens, corn-fields, enclosures of meadows, or shall maliciously destroy any property whatsoever, belonging to the inhabitants of the United States, unless by order of the then commander in chief of the armies of the said states, shall (besides such penalties as they are liable to by law,) be punished according to the nature and degree of the offence, by the judgment of a regimental or general court-martial.

Art. 55. Whosoever, belonging to the armies of the United States, employed in foreign parts, shall force a safe guard, shall suffer death.

Art. 56. Whosoever shall relieve the enemy with money, victuals, or ammunition, or shall knowingly harbor or protect an enemy, shall suffer death or such other punishment as shall be ordered by the sentence of a court-martial.

Art. 57. Whosoever shall be convicted of holding correspondence with, or giving intelligence to the enemy, either directly or indirectly, shall suffer death, or such other punishment as shall be ordered by the sentence of a court-martial.

Art. 58. All public stores taken in the enemy's camp, towns, forts, or magazines, whether of artillery, ammunition, clothing, forage, or provisions, shall be secured for the service of the United States; for the neglect of which the commanding officer is to be answerable.

Art. 59. If any commander of any garrison, fortress, or post, shall be compelled, by the officers and soldiers under his command, to give up to the enemy, or to abandon it: the commissioned officers, non-commissioned officers, or soldiers, who shall be convicted of having so offended, shall suffer death, or such other punishment as shall be inflicted upon them by the sentence of a court-martial.

Art. 60. All suttlers and retainers to the camp, and all persons whatsoever, serving with the armies of the United States, in the field, though not inlisted soldiers, are to be subject to orders, according to the rules and discipline of war.

Art. 61. Officers having brevetts, or commissions, of a prior date to those of the regiment in which they serve, may take place in courts-martial and on detachments, when composed of different corps, according to the ranks given them in their brevetts, or dates of their former commissions; but in the regiment, troop, or company, to which such officers belong, they shall do duty and take rank, both in courts-martial and on detachments, which shall be composed only of their own corps, according to the commissions by which they are mustered in the said corps.

Art. 62. If upon marches, guards, or in quarters, different corps of the army shall happen to join, or do duty together, the officer highest in rank of the line of the army, marine corps, or militia, by commission there, on duty, or in quarters, shall command the whole, and give orders for what is needful to the service, unless otherwise specially directed by the president of the United States, according to the nature of the case.

Art. 63. The functions of the engineers being generally confined to the most elevated branch of military science, they are not to assume, nor are they subject to be ordered on any duty beyond the line of their immediate profession, except by the special order of the president of the United States; but they are to receive every mark of respect, to which their rank in the army may entitle them, respectively, and are liable to be transferred, at the discretion of the president, from one corps to another, regard being paid to rank.

Art. 64. General courts-martial may consist of any number of commissioned officers, from five to thirteen, inclusively, but they shall not consist of less than thirteen, where that number can be convened, without manifest injury to the service.

Art. 65. Any general officer commanding an army, or colonel commanding a separate department, may appoint general courts-martial, whenever necessary. But no sentence of a court-martial shall be carried into execution until after the whole proceedings shall have been laid before the officer ordering the same, or the officer commanding the troops for the time being; neither shall any sentence of a general court-martial, in time of peace, extending to the loss of life, or the dismission of a commissioned officer, or which shall, either in time of peace or war, respect a general officer, be carried into execution, until after the whole proceedings shall have been transmitted to the secretary of war, to be laid before the president of the United States, for his confirmation or disapproval, and orders in the case. All other sentences may be confirmed and executed by the officer ordering the court to assemble, or the commanding officer for the time being, as the case may be.

Art. 66. Every officer commanding a regiment, or corps, may appoint, for his own regiment or corps, courts-martial, to consist of three commissioned officers, for the trial and punishment of offences, not capital, and decide upon their sentences. For the same purpose all officers, commanding any of the garrisons, forts, barracks, or other places where the troops consist of different corps, may assemble courts-martial, to consist of three commissioned officers, and decide upon their sentences.

Art. 67. No garrison, or regimental court-martial shall have the power to try capital cases, or commissioned officers; neither shall they inflict a fine exceeding one month's pay, nor imprison, nor put to hard labor, any non-commissioned officer or soldier, for a longer time than one month.

Art. 68. Whenever it may be found convenient and necessary to the public service, the officers of the marines shall be associated with the officers of the land forces, for the purpose of holding courts-martial and trying offenders belonging to either; and in such cases the orders of the senior officers of either corps who may be present and duly authorised, shall be received and obeyed.

Art. 69. The judge advocate, or some person deputed by him, or by the general, or officer commanding the army, detachment, or garrison, shall prosecute in the name of the United States, but shall so far consider himself as council for the prisoner, after the said prisoner shall have made his plea, as to object to any leading question to any of the witnesses, or any question to the prisoner, the answer to which might tend to criminate himself; and administer to each member of the court before they proceed upon any trial, the following oath, which shall also be taken by all members of the regimental and garrison courts-martial.

"You A. B. do swear that you will well and truly try and determine, according to evidence, the matter now before you, between the United States of America, and the prisoner to be tried, and that you will duly administer justice, according to the provisions of 'An act establishing rules and articles for the government of the armies of the United States,' without partiality, favor, or affection; and if any doubt shall arise, not explained by said articles, according to your conscience, the best of your understanding, and the custom of war, in like cases; and you do further swear, that you will not divulge the sentence of the court until it shall be published by the proper authority; neither will you disclose or discover the vote or opinion of any particular member of the court-martial, unless required to give evidence thereof as a witness, by a court of justice, in a due course of law. *So help you God.*"

And as soon as the said oath shall have been administered to the respective members, the president of the court shall administer to the judge advocate, or person officiating as such, an oath in the following words:

"You A. B. do swear, that you will not disclose or discover the vote or opinion of any particular member of the court martial, unless required to give evidence thereof as a witness, by a court of justice in due course of law. Nor divulge the sentence of the court to any but the proper authority, until it shall be duly disclosed by the same. *So help you God.*"

Art. 70. When any prisoner arraigned before a general court-martial shall, from obstinacy and deliberate design, stand mute or answer foreign to the purpose, the court may proceed to trial and judgment as if the prisoner had regularly pleaded not guilty.

Art. 71. When a member shall be challenged by a prisoner, he must state his cause of challenge, of which the court shall, after due deliberation determine the relevancy or validity, and decide accordingly; and no challenge to more than one member at a time shall be received by the court.

Art. 72. All the members of a court-martial are to behave with decency and calmness; and in giving their votes, are to begin with the youngest in commission.

Art. 73. All persons who give evidence before a court martial, are to be examined on oath or affirmation in the following form:

"You swear or affirm (as the case may be) the evidence you shall give in the cause now in hearing, shall be the truth, the whole truth, and nothing but the truth. *So help you God.*"

Art. 74. On the trials of cases not capital, before courts-martial, the deposition of witnesses not in the line or staff of the army, may be taken before some justice of the peace, and read in evidence; provided the prosecutor and the person accused are present at the taking the same, or are duly notified thereof

Art. 75. No officer shall be tried but by a general court-martial, nor by officers of inferior rank, if it can be avoided. Nor shall any proceedings or trials be carried on excepting between the hours of eight in the morning, and three in the afternoon, excepting in cases, which, in the opinion of the officers appointing the court-martial, require immediate example.

Art. 76. No person whatsoever shall use any menacing words, signs, or gestures, in presence of a court-martial, or shall cause any disorder or riot, or disturb the proceedings, on the penalty of being punished at the discretion of the said court-martial.

Art. 77. Whenever any officer shall be charged with a crime, he shall be arrested and confined in his barracks, quarters, or tent, and deprived of his sword, by the commanding officer. And any officer who shall leave his confinement before he shall be set at liberty by his commanding officer, or by a superior officer, shall be cashiered.

Art. 78. Non-commissioned officers and soldiers, charged with crimes, shall be confined, until tried by a court-martial, or released by proper authority.

Art. 79. No officer or soldier who shall be put in arrest, shall continue in confinement more than eight days, or until such time as a court-martial can be assembled.

Art 80. No officer commanding a guard, or provost marshal, shall refuse to receive or keep any prisoner committed to his charge, by an officer belonging to the forces of the United States; provided the officer committing, shall, at the same time, deliver an account in writing, signed by himself, of the crime with which the said prisoner is charged.

Art. 81. No officer commanding a guard, or provost marshal, shall presume to release any person committed to his charge, without proper authority for so doing, nor shall he suffer any person to escape, on the penalty of being punished for it by the sentence of a court-martial.

Art. 82. Every officer or provost marshal, to whose charge prisoners shall be committed, shall, within twenty four hours after such commitment, or as soon as he shall be relieved from his guard, make report in writing, to the commanding officer of their names, their crimes, and the names of the officers who committed them, on the penalty of being punished for disobedience or neglect, at discretion of a court-martial.

Art. 83. Any commissioned officer convicted before a general court-martial of conduct unbecoming an officer and a gentleman, shall be dismissed the service.

Art. 84. In cases where a court-martial may think it proper to sentence a commissioned officer to be suspended from command, they shall have power also to suspend his pay and emoluments for the same time, according to the nature and heinousness of the offence.

Art 85. In all cases where a commissioned officer is cashiered for cowardice or fraud, it shall be added in the sentence, that the crime, name, and place of abode and punishment of the delinquent, be published in the newspapers in and about the camp, and of the particular state from which the offender came, or where he usually resides, after which it shall be deemed scandalous for an officer to associate with him.

Art. 86. The commanding officer of any post or detachment, in which there shall not be a number of officers adequate to form a general court-martial, shall, in cases which require the cognizance of such a court, report to the commanding officer of the department, who shall order a court to be assembled at the nearest post or detachment, and the party accused, with necessary witnesses, to be transported to the place where the said court shall be assembled.

Art. 87. No person shall be sentenced to suffer death, but by the concurrence of two thirds of the members of a general court-martial, nor except in the cases herein expressly mentioned; nor shall more than fifty lashes be inflicted on any offender, at the discretion of a court-martial; and no officer, non-commissioned officer, soldier, or follower of the army, shall be tried a second time for the same offence.

Art. 88. No person shall be liable to be tried and punished by a general court-martial for any offence which shall appear to have been committed more than two years before the issuing of the order for such trial, unless the person, by reason of having absented himself or some other manifest impediment, shall not have been amenable to justice within that period.

Art. 89. Every officer authorised to order a general court-martial, shall have power to pardon or mitigate any punishment ordered by such court, except the sentence of death, or of cashiering an officer; which, in the cases where he has authority (by article 65) to carry them into execution, he may suspend, until the pleasure of the president of the United States can be known; which suspension, together with the copies of the proceedings of the court-martial, the said officer shall immediately transmit to the president, for his determination. And the colonel or commanding officer of the regiment or garrison where any regimental or garrison court-martial shall be held, may pardon or mitigate any punishment ordered by such court to be inflicted.

Art 90. Every judge advocate, or person officiating as such, at any general court-martial, shall transmit, with as much expedition as the opportunity of time and distance of place can admit, the original proceedings and sentence of such court-martial, to the secretary of war, which said original proceedings and sentence shall be carefully kept and preserved in the office of said secretary, to the end that the persons entitled thereto may be enabled, upon application to the said office, to obtain copies thereof.

The party tried by any general court-martial, shall, upon demand thereof made by himself or by any person or persons in his behalf, be entitled to a copy of the sentence and proceedings of such court-martial.

Art. 91. In cases where a general or commanding officer may order a court of inquiry to examine into the nature of any transaction, accusation, or imputation against any officer or soldier, the said court shall consist of one or more officers, not exceeding three, and a judge advocate, or other suitable person as a recorder, to reduce the proceedings and evidence to writing, all of whom shall be sworn to the faithful performance of their duty. This court shall have the same power to summon witnesses as a court-martial, and to examine them on oath. But they shall not give their opinion on the merits of the case, excepting they shall be thereto specially required. The parties accused shall also be permitted to cross examine and interrogate the witnesses, so as to investigate fully the circumstances in question.

Art. 92. The proceedings of a court of inquiry must be authenticated by the signature of the recorder and the president, and delivered to the commanding officer: and the said proceedings may be admitted as evidence by a court martial, in cases not capital, or extending to the dismission of an officer, provided that the circumstances are such, that oral testimony cannot be obtained. But as courts of inquiry may be perverted to dishonorable purposes, and may be considered as engines of destruction to military merit, in the hands of weak and envious commandants, they are hereby prohibited, unless directed by the president of the United States, or demanded by the accused.

Art. 93. The judge advocate, or recorder, shall administer to the members the following oath:

"You shall well and truly examine and inquire, according to your evidence, into the matter now before you, without partiality, favor, affection, prejudice, or hope of reward: So help you God."

After which the president shall administer to the judge advocate, or recorder, the following oath:

"You A. B do swear that you will, according to your best abilities, accurately and impartially record the proceedings of the court, and the evidence to be given in the case in hearing: So help you God"

The witnesses shall take the same oath as witnesses sworn before a court-martial.

Art. 94. When any commissioned officer shall die or be killed in the service of the United States, the major of the regiment, or the officer doing the major's duty in his absence, or in any post or garrison, the second officer in command, or the assistant military agent, shall immediately secure all his effects or equipage, then in camp or quarters, and shall make an inventory thereof, and forthwith transmit the same to the office of the department of war, to the end that his executors or administrators may receive the same.

Art. 95. When any non-commissioned officer, or soldier, shall die, or be killed in the service of the United States, the then commanding officer of the troop, or company, shall, in the presence of two other commissioned officers, take an account of what effects he died possessed of, above his arms and accoutrements, and transmit the same to the office of the department of war; which said effects are to be accounted for, and paid to the representatives of such deceased non-commissioned officer or soldier And in case any of the officers, so authorised to take care of the effects of deceased officers and soldiers, should, before they have accounted to their representatives for the same, have occasion to leave the regiment, or post, by preferment or otherwise, they shall, before they be permitted to quit the same, deposit in the hands of the commanding officer, or of the assistant military agent, all the effects of such deceased non-commissioned officers and soldiers, in order that the same may be secured for, and paid to, their respective representatives.

Art. 96 All officers, conductors, gunners, matrosses, drivers, or other persons whatsoever, receiving pay or hire in the service of the artillery or corps of engineers of the United States, shall be governed by the aforesaid rules and articles, and shall be subject to be tried by courts-martial, in like manner with the officers and soldiers of the other troops in the service of the United States.

Art. 97. The officers and soldiers of any troops, whether militia or others, being mustered and in pay of the United States, shall, at all times, and in all places, when joined or acting in conjunction with the regular forces of the United States, be governed by these rules and articles of war, and shall be subject to be tried by courts-martial, in like manner with the officers and soldiers in the regular forces, save only that such courts-martial shall be composed entirely of militia officers.

Art. 98. All officers, serving by commission from the authority of any particular state, shall on all detachments, courts-martial, or other duty, wherein they may be employed in conjunction with the regular forces of the United States, take rank, next after all officers of the like grade in said regular forces, notwithstanding the commissions of such militia or state officers may be elder than the commissions of the officers of the regular forces of the United States.

Art. 99. All crimes not capital, and all disorders and neglects which officers and soldiers may be guilty of, to the prejudice of good order and military discipline, though not mentioned in the foregoing articles of war, are to be taken cognizance of by a general or regimental court-martial, according to the nature and degree of the offence, and be punished at their discretion.

Art. 100. The president of the United States, shall have power to prescribe the uniform of the army.

Art. 101. The foregoing articles are to be read and published once in every six months, to every garrison, regiment, troop or company, mustered or to be mustered in the service of the United States, and are to be duly observed and obeyed, by all officers and soldiers who are or shall be in said service.

Sec. II. That in time of war all persons not citizens of, or owing allegiance to the United States of America, who shall be found lurking as spies, in or about the fortifications or encampments of the armies of the United States, or any of them, shall suffer death, according to the law and usage of nations, by sentence of a general court-martial.

Sec. III. That the rules and regulations, by which the armies of the United States have heretofore been governed, and the resolves of congress thereunto annexed, and respecting the same, shall henceforth be void and of no effect, except so far as may relate to any transactions under them, prior to the promulgation of this act, at the several posts and garrisons respectively, occupied by any part of the army of the United States.

LAY. *To lay down*, implies to resign, as, the enemy laid down their arms; he means to lay down his commission.—*To lay for*, is to attempt something by ambuscade.

LAZARET, *Fr.* those large houses are so called which are built in the neighborhood of some sea-ports belonging to the Levant, for the purpose of lodging the people that are ordered to perform quarantine.

LAZARETTO, the same as lazaret.

LAZARUS, } a military order instituted at Jerusalem by
LAZARO, } the Christians of the west, when they were masters of the Holy-Land, who received pilgrims under their care and guarded them on the roads from the insults of the Mahomedans. This order was instituted in the year 1119, and confirmed by a bull of Pope Alexander IV. in 1255, who gave it the rule of St. Augustine.

LEAD, a metal well known. It is employed for various mechanical uses; as in thin sheets for covering buildings, for pipes, pumps, shot, bullets, windows, for securing iron bars in hard stones, for sundry kinds of large vessels for evaporation, and many other purposes.

LEADER. See COMMANDER.

File LEADER, the front man of a battalion or company, standing two or three deep.

LEADING-COLUMN, the first column that advances from the right, left, or centre of an army or battalion.

LEADING-FILE, the first men of a battalion or company, that march from right, left, or centre, in files.

Flank LEADING-FILE, the first man on the right, and the last man on the left of a battalion, company, or section, are so called.

Centre LEADING-FILE, the last man of the right centre company, division, or section; and the first man of the left centre company, division, or section, are so called, when the line files from the centre to the front or rear. At close order, the colors stand between them.

LEAGUE, in *military history*, a measure of length, containing more or less geometrical paces, according to the different usages and customs of countries. A league at sea, where it is chiefly used by us, being a land measure mostly peculiar to the French and Germans, contains 3000 geometrical paces, or 3 English miles.

The French league sometimes contains the same measure, and, in some parts of France, it consists of 3500 paces: the mean or common league consists of 2400 paces, and the little league of 2000. The Spanish leagues are larger than the French, 17 Spanish leagues making a degree, or 20 French leagues, or 69 1-2 English statute miles. The German and Dutch leagues contain each 4 geographical miles. The Persian leagues are pretty near of the same extent with the Spanish; that is, they are equal to 4 Italian miles, which is pretty near to what Herodotus calls the length of the Persian parasang, which contained 30 stadia, 8 whereof, according to Strabo, make a mile. See MEASURE.

LEAGUE also denotes an alliance or confederacy between princes and states for their mutual aid, either in attacking some common enemy, or in defending themselves.

LEAVE, indulgence, licence, liberty.

LEAVE *of absence*, a permission which is granted to officers, non-commissioned officers, and soldiers, to be absent from camp or quarters for any specific period.

General LEAVE, an indulgence which is annually granted on home service, by the commander in chief, to a certain proportion of the army, to be absent from military duty. This generally occurs in the winter months, and ends on the 10th of March, and in time of peace only.

LECTURES. Lectures are read at the British establishment at Woolwich to the officers of artillery, and engineers, and cadets, on chemistry: lectures upon topography and upon other essential parts of military science are given at High Wycombe: British colleges.

LEEKUK, *Ind.* a secretary or writer.

LEFT *give point.* See SWORD-EXERCISE.

LEFT *protect.* See SWORD-EXERCISE.

To put on the LEG, among cavalry, is to press the inside of the foot and leg against the horse's flank. It is always used in passaging to direct the horse which way to passage, and again on the opposite flank to stop him after he has passaged to his place.

LEGATUS, *in Roman antiquity*, a military officer who commanded as deputy of the chief general.

Kennett, in his Antiquities, observes, that the design of the legati, at their first institution, was not so much to command as to advise. The senate selecting some of the oldest and most prudent members to assist the general in his councils.

Dionysius calls this the most honorable and sacred office among the Romans, bearing not only the authority of a commander, but with all, the sanctity and veneration of a priest.

Under the emperors there were two sorts of *legati, consulares* and *prætorii*; the first of which commanded the whole armies, as the emperor's lieutenant generals, and the other only particular legions.

Machiavel highly extols the wisdom of the Romans, in allowing their generals unlimited commissions.

LEGER. This word although it be not strictly military, is in some degree connected with the profession, as diplomacy is not wholly foreign to military negociation. A leger ambassador, or resident signifies any person acting in that capacity, who remains stationary.

Artillerie Légère, Fr. The light or horse artillery.

Cavalerie Légère, Fr. Light horse.

Un Cheval léger à la main, Fr. A horse which is easily managed, or is not hard mouthed.

Troupes Légères, Fr. Light troops, or such as act in desultory warfare.

LEGION, in *Roman antiquity*, a body of foot, which consisted of ten cohorts, or 5000 men.

The exact number contained in a legion, was fixed by Romulus at 3000; though Plutarch assures us, that, after the reception of the Sabines into Rome, he increased it to 6000. The common number afterwards, in the first times of the free state, was 4000; but in the war with Hannibal, it rose to 5000; and after that, it is probable that it sunk again to 4200, which was the number in the time of Polybius.

In the age of Julius Cæsar, we do not find any legions exceeding the Polybian number of men; and he himself expressly speaks of two legions, that did not make above 7000 between them. (Commentar. lib. 5.)

The number of legions kept in pay together was different, according to the various times and occasions. During the free state, four legions were commonly fitted up every year, and divided between the consuls: yet in cases of necessity, we sometimes meet with no less than 16 or 18 in Livy.

Augustus maintained a standing army of 23 (or as some will have it) of 25 legions; but in aftertimes we seldom find so many.

They borrowed their names from the order in which they were raised, as *prima, secunda, tertia*, &c. but because it usually happened, that there were several *primæ, secundæ*, &c. in several places, upon that account they took a sort of surname besides, either from the emperors who first constituted them, as Augusta, Claudiana, Galbiana, Flavia, Ulpia, Trajana, Antoniana, or from the provinces which had been conquered chiefly by their valor, as Parthica, Scythica, Gallica, Arabica, &c. or from the names of the particular deities for whom their commanders had an especial honor, as Minervia and Appollinaris; or from the region where they had their quarters, as Cretensis, Cyrenaica, Britannica, &c. or sometimes upon account of the lesser accidents, as Adjutrix, Martia, Fulminatrix, Rapax, &c.

The whole Roman infantry, which was divided into four sorts, Velites, Hastati, Principes, and Triarii, consisted of Manipuli, Cohorts, and Legions. So that legion was considered as the largest establishment for foot soldiers. See Kennett's Ant. of Rome, pages 190, 191.

Marshal Saxe has written at some length, respecting legion.

LEGION, in a general acceptation of the term, signifies any large body of men. In a more confined one among the moderns, it applies to a specific number of horse and foot, who are distinguished by that name, and do duty with the rest of the army. Such for instance was the British legion which served in America; and of this description were the Polish and Belgic legions, that formed part of the French army in the early part of the revolution. The French armies now form *corps d'armée*, which are in fact legions; and of 20 to 30,000 men each.

LEGIONARY, any thing appertaining to a legion, or containing an indefinite number.

LEGUMES, *Fr.* vegetables, roots, grain, &c. Every species of subsistence, which under the old government of France, was not provided for the troops by direct instructions from the war office, and at the expence of the public, was called *legumes*. Subsistence of this sort, however, may more properly be called that diet which soldiers got for themselves in foreign countries during actual hostilities.

Legumes, or vegetable food, &c. was classed under two specific heads. That which grew in consequence of the ground having been tilled and sowed, and that which rose spontaneously from the earth. Beans, peas, carrots, &c may be considered as belonging to the first class, and those herbs or wild roots which have been cultivated in gardens, or are to be found in woods, &c. may come under the second. The latter sort, indeed, was frequently resorted to by the soldier in order to give a seasoning to his mess. Parties under the command of subaltern officers were permitted to accompany the foragers for the purpose of procuring this wholesome and pleasant addition to the regulated subsistence; and when there were not any foraging days, soldiers were permitted to gather roots and vegetables within the limits of the outermost house or vedette quarters, or of the regular outposts of the infantry.

To LENGTHEN *out*, in a military sense, means to stride out.

To LENGTHEN *the step*, to take more than the prescribed pace.

LESKAR, the camp of the great Mogul.

To LET *in*, to admit; as he *let* some of the enemy's advanced parties in, or into the camp, &c.

To LET *off*, to discharge.

To LET *off a pistol or musquet*, to fire either of those fire arms.

LETTER *of mark*, } a letter granted
LETTER *of marque*, } to a ship captain impowering him to make reprisals for what was formerly taken from him, by ships of another state, contrary to the law of mart. See MARQUE.

LETTER *of mark*, a commission granted the commander of a merchant ship or privateer, to cruise against, and make prizes of the enemy's ships and vessels, either at sea, or in their harbors.

LETTER *of service*, a written order or authority issued by the secretary at war, empowering any officer or individual to raise a given body of men to serve as soldiers, within a certain time, and on special conditions.

LETTER, in its general acceptation, a character such as forms the alphabet, or any thing written, such as an epistle, &c.

LETTER *of attorney*, an instrument in writing, authorizing an attorney, or any confidential person, to take the affairs of another in trust. A letter or power of attorney is necessary to empower a person to receive the half-pay of an officer. This should be accompanied by a certificate sworn to by the officer before some magistrate or justice of the peace.

LETTER *of credit*, a letter which is given from one merchant or banker to another, in favor of a third person, enabling the latter to take up money to a certain amount. Sometimes a letter of credit is given without any specific limitation.

LETTER *of licence*, a deed signed and sealed by the creditors of a man, by which he is allowed a given period to enable him to discharge his debts by instalments, or by a certain proportion in the pound.

LETTER-*men*, certain pensioners belonging to Chelsea hospital, are so called.

LETTON, *Fr.* a metal composed of molten copper, called rosette, and of *lapis calaminaris*, or zinc. This is brass

LETTON is used in cannon-foundries. The best practical mode of digesting and mixing the materials, is to put 11 or 12,000 weight of metal, 10,000 weight of rosette, or molten copper, 900 pounds of tin, and 600 pounds of letton. There are various opinions respecting the mixture of these several ingredients.

LETTRE *circulaire*, Fr. a circular letter.

LETTRE *de cachet*, Fr. an infamous state paper, which existed before the French revolution, differing in this essential point from an order of the British privy council, that the former was sealed, and the person upon whom it was served, carried into confinement without even seeing the authority by which he was hurried off in so peremptory a manner, or being tried afterwards for any specific offence; whereas the latter is an open warrant, which, (except when peculiar circumstances occasions a suspension of the habeas corpus act,) has its object closely investigated before a jury. The French *lettre de cachet* was written by the king, countersigned by one of his principal secretaries of state, and sealed with the royal signet.

LETTRES *de service*, Fr. See LETTERS *of service*.

LETTRES *de passe*, Fr. a paper signed by the kings of France, authorizing an officer to exchange from one regiment into another.

LETTRE *de créance, ou qui porte créance*, Fr. A letter of credit. It likewise signifies the credentials which an ambassador presents from his government to a foreign court.

LETTRE *de récréance*, Fr. a letter which an ambassador receives from his government, by which he is recalled from a foreign court.

LETTRES *en chifre*, Fr. Cyphers. Baron Espagnac in the continuation of his *Essai sur l'operation de la guerre*, tom. 1, page 269, gives the following instructions relative to this acquirement. He observes that writing in cypher may be practised in two different ways. First by means of distilled vinegar, which is boiled with silver litharge, one ounce of the latter to a pint of the former. When this mixture has stood some time, it must be carefully poured off from the sediment, and it will appear as clear as rock water. Intelligence or information may be conveyed by writing with this water in the blank spaces of an ordinary letter, on wrapping paper, or on the blank leaves of a book. The instant the writing dries, not the least trace appears of what has been marked. To render the writing legible, you must make use of a water in which quick lime has been dissolved with a mixture of orpiment. This water is as clear as rock water; and if you steep a sheet of paper in it, and lay it upon the letter, book, &c. on which any thing has been written, the different characters will instantly appear.

The first of these distilled liquids is so powerful and searching, that by putting the written letter upon several other sheets of paper, after having rubbed the top sheet with the second water, the writting will be clearly seen in almost all of them. The same circumstance will occur, if you rub the leaf of a book or any piece of paper which you may spread upon it. These waters, especially the last, should be kept in bottles that are well corked up, to prevent the spirituous particles from evaporating. A fresh composition must, indeed, be made, if the old one should seem weakened. The letters that are written must likewise be carefully penned, and kept free from blots, &c. The paper must not be turned, nor rubbed with the hand until the writing be thoroughly dry. This is the author's first proposed mode of writing in cyphers, the second may be seen in page 270 of the work already quoted.

LETTRES *de représailles*, Fr. Reprisals. See LETTERS *of marque*.

LETTRES *de santé*, *patentes de santé* Fr. letters of health.

LEVANT, the countries bordering upon the Mediterranean are so called. It appears to be derived from *le vent*, the wind, or country to windward, in relation to Italy.

LEVANTIN, Fr. A word generally used among the French to distinguish any person from the Levant.

LEVANTINE *nations*, (*Nations Levantines*, Fr.) Nations belonging to the East, or to those countries which border on the Mediterranean. The French likewise say, *Peuples Levantines*.

LEVANTIS, Fr. The soldiers belonging to the Turkish gallies are so called.

LEVEE *des troupes*, Fr. See LEVY.

LEVEE *en Masse*, Fr. a general rising of the people of any country, either for the purposes of self defence, or to answer the intentions of its governing powers.

LEVEE *d'une siege*, Fr. The raising of a siege. See SIEGE.

LEVEL, an instrument to draw a line parallel to the horizon, whereby the difference of ascent or descent between several places may be found, for conveying water, draining fens, &c.

Air-LEVEL, that which shews the line of level by means of a bubble of air, inclosed with some liquor in a glass tube of an indeterminate length and thickness, whose two ends are hermetically sealed. When the bubble fixes itself at a certain mark, made exactly in the centre of the tube, the plane or ruler wherein it is fixed is level; when it is not level, the bubble will rise to one end. This glass tube may be set in another of brass, having an aperture in the middle, whence the bubble of air may be observed. There is one of these instruments with sights, being an improvement upon the last described, which by the addition of more apparatus, becomes more commodious and exact: it consists of an air-level about eight inches long, and 7 or 8 lines in diameter, set in a brass tube, with an aperture in the middle: the tubes are carried in a strong straight ruler, a foot long, at whose ends are fixed two sights, exactly perpendicular to the tubes, and of an equal height, having a square hole, formed by two fillets of brass crossing each other at right angles, in the middle whereof is drilled a very little hole, through which a point on a level with the instrument is described: the brass tube is fastened on the ruler by means of two screws, one whereof serves to raise or depress the tube at pleasure, for bringing it towards a level. The top of the ball and socket is riveted to a little ruler that springs, one end whereof is fastened with screws to the great ruler, and at the other end is a screw serving to raise and depress the instrument when nearly level.

Artillery foot-LEVEL, is in form of a square, having its two branches or legs of an equal length, at the angle of which is a small hole, whence hang a line and plummet, playing on a perpendicular line in the middle of a quadrant: it is divided into twice 45 degrees from the middle.

Gunner's-LEVEL, for levelling pieces of artillery, consists of a triangular brass plate, about 4 inches, at the bottom of which is a portion of a circle divided into 45 degrees; which angle is sufficient for the highest elevation of cannons, mortars, and howitzers, and for giving shot and shells the greatest range: on the centre of this segment of a circle is screwed a piece of brass, by means of which it may be fixed or screwed at pleasure; the end of this piece of brass is made so as to serve for a plummet and index, in order to shew the different degrees of elevation of pieces of artillery. This instrument has also a brass foot, to set upon cannon or mortars, so that when these pieces are horizontal, the instrument will be perpendicular. The foot of this instrument is to be placed on the piece to be elevated, in such a manner, as that the point of the plummet may fall on the proper degree, &c.

The most curious instrument for the use of the artillerist, was lately invented by the very ingenious colonel Congreve, of the British artillery; having the following qualifications, viz. 1. It will find the inclination of any plane, whether above or below the horizon. 2. By applying it either to the cylinder, or outside of any piece of ordnance, angles of elevation or depression may be given to the 60th part of a degree, with less trouble than the common gunner's quadrant, which only gives to the 4th part of a degree. 3. It will give the line of direction for laying either guns or mortars to an object above or below the horizon. 4. It will find the centre of metals of any piece of ordnance. 5. With it, a point may be found in the rear of a mortar-bed, in the verticle plane of the mortar's axis; consequently a longer line of sight is given for directing them to the object than the usual way. 6. It answers all the purposes of a pair of callipers, with the advantage of knowing (to the 100th part of an inch) diameters, whether concave or convex, without the trouble of laying the claws upon a diagonal scale. 7. On the sides of the instrument are the following lines, viz. equal parts, solids, plains, and polygons, logarithms, tangents, versed sines, and numbers, plotting scales, and diagonal scale of inches for cutting fuzes by. 8. In the lid of the instrument-case is a pendulum to vibrate half seconds. It is likewise of singular use in surveying; as, 1. It takes horizontal angles to the 60th part of a degree. 2. Vertical angles. 3. Levels. 4. Solves right angled plane triangles. 5. Oblique-angled plane triangles. 6. Answers all the purposes of a protractor, with the advantage of laying down angles exactly as taken in the field. N. B. captain Jordane's ingenious instrument answers nearly the same purposes.

Spirit-Level. See Air Level.

By the term *level* is also to be understood the line of direction in which any missive weapon is aimed.

LEVELLING, the finding a line parallel to the horizon at one or more stations, and so to determine the height of one place in regard to another.

A truly level surface is a segment of any spherical substance, which is concentric to the globe of the earth. A true line of level is an arch of a great circle which is imagined to be described upon a true level surface.

The apparent level is a straight line drawn tangent to an arch or line of true level. Every point of the apparent level except the point of contact, is higher than true level.

he common methods of levelling are sufficient for laying pavements of walks, for conveying water to small distances, for placing horizontal dials, or astronomical instruments; but in levelling the bottoms of canals or ditches in a fortification, which are to convey water to the distance of many miles, the difference between the apparent and true level must be taken into the account.

Dr. Halley suggests a method of levelling, which is performed wholly by the barometer, in which the mercury is found to be suspended to so much the less height, as the place is more remote from the centre of the earth. Hence it follows, that the different height of the mercury in two places gives the difference of level.

Mr. Derham, from some observations at the top and bottom of the monument in London, found that the mercury fell 1-10th of an inch at every 82 feet of perpendicular ascent, when the mercury was at 30 inches. Dr. Halley allows of 1-10th of an inch for every 30 yards; and considering how accurately barometers are now made, we think this method sufficiently exact to take levels for the conveyance of water, or any other military purposes, and indeed less liable to errors than the common levels. Mr. Derham also found a difference of 3 inches 8-10ths between the height of the mercury at the top and bottom of Snowdonhill in Wales.

For the common occasions of levelling, set a pole upright in a spring, pond, &c. and mark how many feet and inches are above water; then set up another pole of equal length with the other, in the place to which the water is to come. Place the centre of a quadrant on the top of this last pole, the plummet hanging free; spy through the sights at the top of the pole in the water, and if the thread cuts any degree of the quadrant, the water may be conveyed by a pipe laid in the earth. If you cannot see from one extreme to the other, the operation may be repeated.

Levelling.—*Table shewing the difference between the true and apparent level.*

Difference of level.	Ft. in.	32 6	42 6	53 9	66 4	80 3	95 2	112 2	130 1	150	175
Distance.	Mls	7	8	9	10	11	12	13	14	15	16
Difference of level.	Ft. in.	0 0½	0 2	0 4½	0 8	2 8	6 0	10 7	16 7	23 11	
Distance.	Mls	¼	½	¾	1	2	3	4	5	6	
Difference of level.	Inch.	2.570	3.110	3.701	4.344	5.038	5.784	6.580	7.425		
Distance.	Yds	1000	1100	1200	1300	1400	1500	1600	1700		
Difference of level.	Inch.	0.026	0.103	0.231	0.411	0.643	0.925	1.260	1.645	2.081	
Distance.	Yds	100	200	300	400	500	600	700	800	900	

This table will answer several useful purposes.

First.—*To find the height of the apparent level above the true, at any distance.*—If the given distance be contained in the table, the correction of level is found in the same line with it; but if the exact distance be not found in the table, then multiply the square of the distance in yards, by 2.57, and divide by 1,000,000, or cut off 6 places on the right for decimals; the rest are inches: or multiply the square of the distance in miles, by 66 feet 4 inches, and divide by 100.

Second.—*To find the extent of the visible horizon, or how far can be seen from any given height, on a horizontal plane, at sea, &c.*—The height of the observer's eye above the horizon being known, the extent of his visible horizon is found in the column opposite, under the word *Distances*.

Third —*To find the distance of any object when it first comes in sight, its height being known.*—For the distance of any object will be the extent of the visible horizon of the observer, added to the visible horizon of the point he observes. It is necessary in this case for the observer to know only the height of that part of the object which is kept from his view, by the curvilinear figure of the globe.—Knowing the distance of an object, its height may be found in the same manner.

If the height or distance exceed the limits in the table; then, first, if the distance be given, divide it by 2, 3, or 4, till the quotient comes within the distances in the table; then take out the height answering to the quotient, and multiply it by the square of the divisor for the height required. But when the height is given, divide it by one of these square numbers, 4, 9, 16, 25, &c. till the quotient come within the limits of the table, and multiply the quotient by the square root of the divisor.

Levelling *staves*, instruments used in levelling, that carry the marks to be observed, and at the same time measure the heights of those marks from the ground. These usually consists of two wooden square rulers, that slide over one another, and are divided into feet, inches, &c.

Levelling has two distinct applications in the art of war, in the one case it implies the reduction of an uneven surface to that of a plane, so that the works of a fortification may be of a correspondent height or figure throughout. The other is the art of conveying water from one place to another; in this process, it is found necessary to make an allowance between the true and apparent level, or in other words, for the figure of the earth, for the true level is not a straight line, but a curve which falls below the straight line about 8 inches in a mile, 4 times 8 in 2 miles, 9 times 8 in 3 miles, 16 times 8 in 4 miles, always increasing with the square of the distance.

Levelling *System*, a term which since the commencement of the French revolution has been grossly misinterpreted, and cannot be found in any civilized country to answer any other purpose than that of delusion; such was the calumny raised by the patricians of Rome, when they having plundered the soldiers of their lands and appropriated to themselves; when the people complained they were thus reproached; the *agrarian law* which proposed only to restore the lands to the owners, was called a levelling system; but the people were robbed and the consequence was the ultimate ruin of Roman liberty, and Rome itself; the word Jacobin in modern times has superseded leveller.

LEVER, a balance which rests upon a certain determinate point called a fulcrum.

Lever in *mechanics*, an inflective line, rod, or beam, moveable about, or upon a fixed point, called the prop or fulcrum, upon one end of which is the weight to be raised, at the other end is the power applied to raise it; as the hand, &c.

Since the momentum of the weight and power are as the quantities of matter in each, multiplied by their respective celerities; and the celerities are as the distances from the centre of motion, and also as the spaces passed through in a perpendicular direction in the same time, it must follow, that there will be an equilibrium between the weight and power, when they are to each other reciprocally as the distances from the centre, or as the celerities of the motions, or as the perpendicular ascent or descent in the same time; and this universally in all mechanical powers whatsoever, and which is therefore the fundamental principle of all mechanics. See Mechanical Powers.

LEVET, the blast of a trumpet.

LEVIER, *Fr.* Lever. The French writers having been more explicit on this head than any of our lexicographers, we shall extract the following passages as conducive to general information. The levier or lever is an instrument made of wood or iron, by whose means the heaviest weights may be raised with few hands. When the lever is made of iron, it is called pince or crow. The lever may be considered as the first of all machines. Wheels, pullies, capstans, &c. act only by the power it possesses. The lever must be looked upon as a straight line, which has three principal points, namely, the one on which the load is placed, and which is to be raised, the appui or rest which is the centre round which it turns, and which the French mechanics call *orgueil*, and lastly the human arm, which is the power that puts the lever into motion. The different arrangements or disposition which is given to these three points, or rather the unequal distances at which they are placed, occasion the force that is collectively displayed.

Belidor makes the following remarks on

this useful machine. It is an inflexible bar which must be considered as having no weight in itself, upon which three powers are made to act in three different points in such a manner, that the action of two powers must be directly opposed to the one that resists them. The point where the opposing power acts is called the *point d'appui*.

Levier, in artillery, a wedge.

Levier *de pointage*, Fr. a wedge to assist in pointing pieces of ordnance.

LEVIERS *de support*, Fr. a wedge by which cannon is raised to a certain line of direction.

To **LEVY**, has three distinct military acceptations, as to *levy* or *raise* an army, to *levy* or make war; and, to *levy* contributions.

LEVY, the levying, or raising troops, by enregistering the names of men capable of bearing arms, for the common defence and safety of a country, has from time immemorial been a leading principle among men.

There are indeed some people still existing, who indiscriminately go to war, leaving, for the immediate security of their huts or habitations, only their old men, their wives and children.

Among the Romans, however, and in some other civilized countries, it was a prevailing maxim never to employ above a certain proportion of matured population, and that proportion consisted uniformly of men who were expert at arms.

National assemblies were called together whenever the situation of the country required, that the senate's decree should be published and put into effect.

The levying or raising of troops for service was regulated in the following manner under two specific heads, called ordinary and extraordinary levy. The ordinary levy took place in consequence of a decree from the senate by which all males of a certain age were called out to do military service: the extraordinary levy was enforced when a deficiency was found in the ordinary levy to answer the immediate exigencies of the state.

The extraordinary levy, which was further distinguished by the word evocation, (See *Evocati*) was performed as follows. A public orator mounted the rostrum, and after having expatiated upon the urgency of the case, and paid a handsome tribute of commendation to all who should voluntarily step forward to defend their country, he entrusted the conclusion of the business to two superior officers who were to command the new levies.

These officers instantly unfurled two flags, and emphatically exclaimed, *let all those brave men who have the safety of the Republic at heart flock to our standards!* A red flag was the rallying mark for all who were to serve on foot, and a blue flag pointed out the rendezvous for cavalry. Every one was at liberty to chuse the service he liked best.

With respect to the ordinary levy by which every citizen was liable to be called upon for personal service, it was conducted in the following manner.

All the different tribes into which the inhabitants of the country were divided, assembled in places marked out for that purpose, and as soon as a whole tribe, consisting of males only, had entered, the public crier called over, in a distinct and audible manner, the names of four persons, after which the first military tribune, from among those of that rank who were to command the intended legion, selected one out of the four, and had him enrolled.

The crier then called over the names of four others belonging to the same class, and the second tribune selected one from the four in the same manner as the first had done. This selection went on through the different classes, until the whole tribe was drafted, and another tribe was then subjected to the same rotation. Legions were formed out of these levies, and completed to so effective a strength, that three of them generally composed a Roman army. The Romans readily submitted to these calls of the state; and they did so the more cheerfully, because it was a fundamental rule amongst them, that no man could be provided for in a military or civil way, unless he had served a prescribed number of years.

Kennett, in his antiquities of Rome, gives the following account, which the reader will perceive differs in some particulars from the former.

" At the same time of the year as the consuls were declared *elect* or *designed*, they chose the military tribunes; fourteen out of the body of the Equites who had served in the army five years, and ten out of the commonalty, such as had made ten campaigns. The former they called *tribuni juniores*, and the latter *seniores*.

The consuls having agreed on a levy (as, in the time of the commonwealth they usually did every year,) they issued out an edict, commanding all persons who had reached the military age (about seventeen years) to appear (commonly) in the capitol, or in the area before the capitol, as the most sacred and august place, on such a day. The people being come together, and the consuls who presided in the assembly having taken their seat, in the first place, the four and twenty tribunes were disposed of according to the number of legions they designed to make up, which was generally four. The *junior* tribunes were assigned, four to the first legion, three to the second and last. After this, every tribe, being called out by lot, was ordered to divide into their proper centuries; out of each century were soldiers cited by name, with respect had to their estate and class; for which purpose, there were tables ready at hand, in which the name, age, and wealth of every person were exactly described. Four men, as much alike in all circumstances, as could be pitched upon, being presented out of the century, first the tribunes of the first legion chose one, then the tribunes of the second another, the tribunes of the third legion a third man, and the remaining person fell to the tribunes of the fourth. Then four more were drawn out; and now the right of chusing first belonged to the tribunes of the second legion; in the next four to the tribunes of the third legion, then to the tribunes of the fourth legion, and so round; those tribunes chusing last the next time, who chose first the time before; the most equal and regular method imaginable.

Cicero has remarked a superstitious custom observed in these proceedings; that the first soldier pitched upon should for the omen's sake, be such as had fortunate names, as Salvius, Valerius, and the like. Cic. de Divinat. lib. 1.

There were in those times, (as in the present with respect to the militia) many legal excuses which might keep persons from the list; as, in case they were fifty years old, for then they could not be obliged to serve; or if they enjoyed any civil or sacred office, which they could not conveniently relinquish; or if they had already made twenty campaigns, which was the time required for every foot soldier; or if, upon account of extraordinary merit, they had been by public authority, released from the trouble of serving for such a time; or if they were maimed in any part, and so ought not to be admitted into the legions; as Suetonius tells us of a father who cut off the thumbs of his two sons on purpose to keep them out of the army (Sueton. August. chap. 24.) and Valerius Maximus gives a relation of the like nature. Val. Max. lib. 6. cap. 3.)

Otherwise they were necessiated to submit, and in case of a refusal, were usually punished either with imprisonment, fine or stripes, according to the lenity, or severity of the consul. And therefore it seems strange, that Machiavel should particularly condemn the Roman discipline, upon account of forcing no one to the wars, when we have in all parts of history, such large intimations of a contrary practice. Nay, we read too of the *conquisitores* or impress-masters, who were commissioned upon some occasions, to go about, and compel the men to the service of the state.

Valerius Maximus (lib. 6. chap. 3.) gives one example of changing this custom of taking out every particular soldier by the tribunes, for that of chusing them by lot. And Appianus Alexandrinus (in Iberic.) acquaints us, that in the Spanish war, managed by Lucullus, upon complaint to the senate of several unjust practices in the levies, the senate thought fit to chuse all the soldiers by lot. Yet the same author assures us, that within five years time the old custom returned of making the levies in the manner already described.

However, upon any extraordinary occasion of immediate service, they omitted the common formalities, and without much distinction, listed such as they met with, and led them out on an expedition. These they called *Milites Subitarii*. Kennett's Ant. page 183, b. iv.

The French always followed the example of the Romans with regard to the first principles of levying men, which was effected by a proclamation from the court, called the *ban*. This ban was addressed to the principal person belonging to a province, who, in pursuance to its instructions, assembled his vassals, and got them fit and ready for immediate service.

In England a similar rotation took place; and the balloting for militia-men still exhibits some remains of that feudal system. But when regular armies became necessary in Europe (necessary only from the ambition of contiguous and rival nations!) a different system was adopted, and the natural strength of the country was made a secondary object. Disposable means of offence and defence were resorted to by crowned heads; and as war was became a science, permanent bodies of armed men were kept on foot to answer the purposes of prompt and vigorous decision.

Charles VIII. was the first monarch among the French who dispensed with the service of his noblemen, in themselves and vassals; these he replaced by raising regular companies of gendarmes, who were paid out of his privy purse; in process of time cavalry and infantry regiments, with appropriate trains of artillery, &c. were formed into a military establishment, and have continued ever since.

During the existence of the old government in France, it was customary for the king to issue orders that a certain bounty should be offered to all recruits who would inlist; and when regiments, in time of war, suffered materially, men were frequently drafted out of the militia to complete their establishment.

With respect to the standing or permanent army of England, the first traces of it are to be found during the reign of Henry VII; from that period until the present time the military establishment of Great Britain has been progressive. Levies have been made in various ways, upon various principles.

The French system of conscription is the most profound and perfect that has ever been devised; no man is exempted. And in this respect it is the only system in its principle adapted to a free state, where all individuals having equal rights, have also corresponding duties and obligations.

Levy likewise means inlisting money.

LICE, *Fr*. List for combats.

LICENCIEMENT *des troupes*, Fr. At the end of a campaign this generally happened in France, when troops could not any longer keep the field owing to the severity of the weather. In former times it was usual, during the continuance of a war, for the French army to retire into winter quarters about the latter end of October. But since the revolution, hostilities have been carried on at all seasons, and under the most disheartening pressure of the weather.

Licenciement *des equipages des vivres*, Fr. It was usual in the old French army, for an order to be issued by which the contractors and commissaries, for the time being, were discharged at the close of a campaign. The director general of the stores always preserved this order, as it formed the only final voucher, upon which the contractors could receive any demand against government. The greatest attention was paid to this important branch of military economy; and, if at the conclusion of a campaign, it was found necessary to retain any part of the establishment for the immediate subsistence of the troops in winter quarters, that part was minutely noticed in the order.

LICENCIER, *Fr.* to discharge.

LIDE, *Fr.* a warlike machine, which was formerly used to throw large stones against a fortified place, or upon an enemy.

To LIE, in a military acceptation of the term, to be in quarters, in cantonments, or to be in camp: the fourth regiment of foot, for instance, lies encamped between Fort Adams and Orleans: or it lies at Orleans. The light dragoons lie along the frontier.

To lie *in ambush*, to be posted in such a manner as to be able to surprise your enemy, should he presume to advance, without having previously cleared the woods, hedges, &c.

To lie *under cover*, to be under the protection of a battery, or to be sheltered by a wood, &c.

To lie *in wait*, to take a position unobserved by the enemy, and to remain under arms, in the expectation of suddenly falling upon his flanks or rear.

LIEU, *Fr.* League. There are three sorts of lieues or leagues in France, the great, middling, and small. The great French league contains three thousand geometrical paces, or two thousand five hundred toises; and the small league two thousand geometrical paces, that is, twice the extent of the Italian mile; which is so called, because it contains one thousand geometrical paces. According to an old existing regulation, the leagues of France were directed to contain two thousand two hundred toises, and two thousand six hundred and forty geometrical paces. See Measure.

In LIEU. In the room, place, or stead of.

LIEUTENANT. This word is originally derived from the Latin legatus, locum tenens, and comes immediately to us from the French *lieu-tenant*, supplying or holding the place of another. In a military sense it means the second person or officer in command. *Lieutenant-general*, the next in command to a general; *lieutenant-colonel*, the next to a colonel; *captain-lieutenant*, an intermediate rank; and *lieutenant*, the next to a captain, in every company of both foot and horse, and who takes the command upon the death or absence of his superior officer. Fuzileer corps, grenadiers, and light infantry, in the British service, have second lieutenants and no ensigns, a very absurd distinction.

Lieutenant *of artillery*. In the British service each company of artillery has 4; 1 first and 3 second lieutenants. The first lieutenant has the same detail of duty with the captain, because in his absence he commands the company: he is to see that the soldiers are clean and neat: that their clothes, arms, and accoutrements are in good and serviceable order; and to watch over every thing else, which may contribute to their health. He must give attention to their being taught their exercise, see them punctually paid, their messes regularly kept, and visit them in the hospitals when sick. He must assist at all parades, &c. He ought to understand the doctrine of projectiles and the science of artillery, with the various effects of gunpowder, however managed or directed. He should likewise be able to construct and dispose batteries to the best advantage; to plant cannon, mortars, and howitzers, so as to produce the greatest annoyance to an enemy. He is to be well skilled in the attack and defence of fortified places, and to be conversant in arithmetic, mathematics, and mechanics, &c.

Second Lieutenant, in the *artillery*, is the same as an ensign in an infantry regiment, being the youngest commissioned officer in the company. It is his duty to assist the first lieutenant in the detail of the company. His other qualifications should be the same as those required in the first lieutenant.

Lieutenant *of engineers*. See Engineers.

Lieutenant-*colonel*. See Colonel.

Lieutenant-*general*. See General.

Lieutenant *du Roi*, Fr. During the monarchy of France there was a deputy governor in every fortified place, or strong town, who commanded in the absence of the governor, and was a check upon his conduct when present. This person was called Lieutenant *du Roi*.

Lieutenant *Reduced*, (*Lieutenant Reformé*, Fr.) he whose company or troop is broke or disbanded, but who continued in whole or half pay, and still preserves his right of seniority and rank in the army.

Lieutenant *de la Colonelle*, Fr. the second officer, or what was formerly styled the captain lieutenant of the colonel's company of every infantry regiment, was so called in France.

Lieutenans *des Gardes Francoises et Suisses*, Fr. lieutenants belonging to the French and Swiss guards. During the existence of the monarchy in France they bore the rank of lieutenant-colonel, and took precedence of all captains.

Lieutenans *Provinciaux d'Artillerie*, Fr. were certain officers belonging to the old French service, and immediately attached to the artillery, who bore the title or name of the particular province in which they were stationed. The majority of this description were employed in the ordnance department; another part superintended different artillery departments upon the frontiers. Some were excused from all duty on account of their age and seniority.

Several provincial lieutenants, who had military employments under the board of ordnance, received the rank of lieutenant general in the army from the king, and could rise to the most exalted stations in common with other officers.

Lieutenant *Général*, Fr. The title and rank of lieutenant-general was of a more desultory nature in France under the old government of that country, than in other countries. High officers of justice were distinguished by the name; and all governors of provinces, as far as their jurisdiction extended, together with the persons who acted under them, were called *lieuténants généraux*. There were likewise persons who bore the title of lieutenant-general of the kingdom at large. Every officer, moreover, that acted immediately under a general, and was next to him in rank, was styled lieutenant-general. It is the same, in this respect, in England. In both countries, however, (considering the subjects as appertaining to a monarchical institution) the title of general was only ostensible and honorary, as his functions were delegated to him by his sovereign, the real general and head of the army. So that intrinsically a general could only be considered as lieutenant-general to the king; but the lieutenant-general who acts under him, must be viewed as holding a relative rank inferior to both. The words of the two commissions sufficiently explain our observation. They are as follow for a lieutenant-general with the nominal rank of general:—*We have made and constituted* N. *our lieutenant-general*, *&c.* and for those acting under him:—*We have made and constituted* N. *one of our lieutenant-generals*. Which plainly indicates, that of the first class there can only be one who represents his sovereign; whereas there are and may be many of the other description. Lieutenant-generals, in the French service, did not receive any pay, in consequence of the rank they bore, unless they actually commanded some part of the army, and received a commission from the king for that purpose. This commission was renewed annually, according to his majesty's pleasure.

Lieutenant-*General d'Artillerie*. See *Lieutenant-general of the* Ordnance.

Lieutenant-*General des Armèes Navales du Roi*, Fr. an officer in the old French service, belonging to the naval department. He took rank of all chefs d'escadre, or commodores, and issued orders through them to inferior officers.

LIFE GUARDS.—See Guards.

LIGHT BOBS, a familiar term used for the light infantry.

LIGHT HORSE. All mounted soldiers, that are lightly armed and accoutred for active and desultory service, may be considered under this term. Thus light dragoons, hussars, mounted riflemen, &c. are strictly speaking light horse.

LIGHT INFANTRY, an active, strong body of men, selected from the aggregate of battalion companies, and made up of the most promising recruits that are occasionally inlisted.

When the light infantry companies are in line with their battalions, they are to form and act in every respect as a company of the battalion; but when otherwise disposed of, they may loosen their files to six inches.

The open order of light infantry is usually two feet between each file.

The files may be extended from right, left, or centre; in executing it, each front rank man must carefully take his distance from the man next to him on that side from which the extension is made: the rear rank men conform to the movement of their file leaders.

When light infantry men fire in extended order, it is to be a standing rule, that the two men of the same file are never unloaded together; for which purpose as soon as the front rank man has fired, he is to slip round the left of the rear rank man, who will take a short pace forward, and put himself in the other's place, whom he is to protect while loading.

The extended order of light infantry varies according to circumstances and situations. They may sometimes loosen their files to three times the distance of open order. But the general rule is to allow convenient intervals for the rear rank men to slip by, and return after they have fired.

All movements of light infantry, except when firing, advancing, or retreating, are to be in quick time.

The officer commanding the company in line will be on the right, covered by a serjeant; the next on the left also covered by a serjeant. The youngest officer in the rear. In extended order the post of the officers and serjeants is always in the rear at equal distances.

In marching by files the officer commanding leads: by divisions each officer leads one. The supernumerary officer, if there be one, is in both cases with the officer commanding, ready to obey any directions he may receive from him.

The arms of light infantry in general are carried sloped, when the bayonets are fixed. Flanking or advanced parties, however, or parties in particular situations, may carry them trailed, and without bayonets, for the purpose of taking a more cool and deliberate aim.

When the light infantry is ordered to cover the line to the front, the divisions will move from their inner flanks round the flanks of the battalions, and when at the distance of fifty paces, the leading flanks will wheel towards each other, so as to meet opposite the centre of the battalion, opening their files gradually from the rear, so as to cover the whole extent of the battalion.

The files are not to wait for any word of command, but to halt and front themselves. In this position, and in all positions of extended order, the post of the officer commanding is in the rear of the centre, and the movements are to be regulated by the company belonging to the battalion, which governs those of the line. See *Am. Mil. Lib.*

Light infantry men, like hussars, are frequently detached to act as scouts on the flanks, in the front, or with the rear guard of the body of troops to which they belong. They then acquire the appellation of skirmishers, and being previously told off for that specific duty, they advance and form in the front in rank entire; which is effected by each man from the rear rank placing himself on the left of his file leader. The rank entire may be resorted to for various purposes during the movements of one or more battalions, since it may serve not only to cover them from the enemy's observation, but in some cases, especially in foggy weather, will itself appear a larger body than it really is. Too much attention cannot be given to the organization of light troops on foot. They are very properly called the eyes of an army, and ought always to be considered as indispensibly necessary.

LIGHT TROOPS. By light troops are generally meant all horse and foot which are accoutred for detached service.

LIGNE, *Fr.* See Line.

LIGNE *d'Eau*, Fr. a term used in aquatics. It is the hundredth and fortieth portion of an inch of water, and furnishes or supplies one hundred and four pints of water, Paris measure, in twenty four hours.

Ligne *de moindre résistance*, Fr. is the line that being drawn from the centre of the *fourneau* or chamber of a mine, runs up in a perpendicular direction to the nearest outward surface.

Lignes *en forme de Crémaillère*, Fr. *Indented lines, or lines resembling the teeth of a saw, or stairs:* they are connected with one another like crotchets; or united by small flanks comprising fourteen or fifteen toises each. M. de Clairac has given a particular account of their construction in his *Ingenieur de Campagne.* The effect, observes that writer, which is produced by the concentrated fire that may be poured from these lines, is perhaps unexampled. One advantage is certain, that of being able to increase your efforts of defence, in proportion as the enemy advances; since it must be evident, that constructed as the flanks are, and enchasing one another, the execution becomes multiplied in every quarter. It may moreover be stated among other advantages, that as the salient points are double in number, and are flanked within half a distance of musquet shot, without stretching far into the country, they must of course be less exposed to the enemy's approaches. From the figure of these lines the troops are enabled to keep up an uninterrupted and regular direct fire; and it is the only construction from which an equal discharge of ordnance or musquetry may be served in every quarter at once.

LIMBER, in *artillery*, a two-wheel carriage with shafts to fasten the trail of travelling carriages by means of a pintle or iron pin, when travelling, and taken off on the battery, or when placed in the park of artillery; which is called unlimbering the guns.

LIME, in *military architecture*, is made of all kind of stones, that will calcine: that which is made of the hardest stone is the best, and the worst of all that which is made of chalk.

Lime will not be sufficiently burnt in less than 60 hours. The signs of well burnt lime are, that its weight is to that of the stone in a sequialterate proportion; that it be white, light, and sonorous; that when slaked, it sticks to the sides of the vessel, sending forth a copious thick smoke, and requires a great deal of water to slake it.

In some countries, as the East Indies and the United States, they make good lime of shells of fish, which dries and hardens in a very short time; and when it is mixed with Dutch terras, is fit for all kind of aquatic works.

Lime should always be burnt with coals, and never with wood, the coals being strongly impregnated with sulphureous particles, which, mixed with the lime, make it more adhesive. See Mortar.

LIMINARQUE, *Fr.* an office of distinction, which existed in the Roman empire. The persons invested with it were directed to watch the frontiers of the empire, and they commanded the troops that were employed upon that service.

LIMITARY, a guard or superintendant, placed at the confines or boundaries of any kingdom or state.

LIMITS, in a military sense, is that distance which a sentry is allowed on his post, namely 50 paces to the right, and as many to the left.

LINCH-*pin*, in artillery, that which passes through the ends of the arms of an axle-tree, to keep the wheels or trucks from slipping off in travelling.

Linch-*clout*, in artillery, the flat iron under the end of the arms of an axle-tree, to strengthen them, and to diminish the friction of the wheels.

LINDEN TREE. The wood used in artificial fire-works, &c.

LINE, in geometry, signifies length, without any supposed breadth or depth. A *straight or right line* is the shortest way from one point to another. A *curved or crooked line* is that which deviates from the shortest way, and embraces a greater space between one point and another. A *perpendicular line* is a straight line, which falling upon another line does not incline either to one side or the other. *Parallel lines* are lines which are at equal distances from one another, in such a manner, that although they may be prolonged ad infinitum, they never can meet.

Euclid's second book treats mostly of lines, and of the effects of their being divided, and again multiplied into one another.

Horizontal **Line** is that which is spread upon the plane of the horizon; such, for instance, are those lines that may be supposed to form the level surface of a plain.

Inclined **Line**, (*ligne inclineé*, Fr.) is that line which leans or is raised obliquely upon the plane of the horizon, and which might resemble the sloping or declivity of a hillock.

Oblique **Line**, (*ligne oblique*, Fr.) a straight line which leans more to one side than another the instant it is brought into contact with any other line.

Line *tangent*, (*ligne tangente*, Fr.) a straight line, which, without intersecting it meets a *curve* at one point, and does not enter, but barely touches it.

Vertical **Line**, (*ligne verticale*, Fr.) a line which is raised perpendicularly above or below the horizon. Of this description are all lines that express height or depth.

The **Line**. This term is frequently used to distinguish the regular army from other establishments of a military nature. All numbered or marching regiments are called the line. The marines, militia, and volunteers, do not come under the term. It is, however, a corruption of the word, since the true import of line in military matters, means that solid part of an army which is called the main body, and has a regular formation from right to left. Thus in the seven years war, when prince Ferdinand commanded the allied army, the British troops under the marquis of Granby did not belong to the line, because they were always detached and acted in front of the main body. Grenadiers and light infantry, when from their several corps, cannot be called the line, but the instant they are incorporated they become so. According to this explanation, and we think it a correct one, the word is very generally misapplied, as it cannot strictly be used to distinguish any particular establishment from another.

Line, *or line of battle*, is the arrangement or disposition of an army for battle: its front being extended along a straight *line* as far as the ground will permit, in order that the several corps of cavalry and infantry which compose it, may not be cut off or flanked by the enemy.

The Ottoman troops are generally drawn up on a curve line, or half-moon, for the purpose of surrounding their enemies by superior numbers. European armies are usually drawn up in three lines; the first being named the *van*, (*avant-garde*, Fr.) the second, *main body*, (*corps de bataille*, Fr.) and the third, which was formerly the weakest, is called the *reserve*, or *rear-guard*. (*Corps de réserve, ou arrière-garde*, Fr.) Each of these lines is so drawn up, that the wings or extremities are always composed of some squadrons of horse, whose intervals are likewise supported by infantry platoons. The battalions are posted in the centre of each line; sometimes they are intermixed with squadrons of horse, when there is a considerable body of cavalry attached to the army.—The space of ground, which in each line separates the different corps from one another, is always equal in extent to the front that is occupied by them. These intervals are left in order to facilitate their several movements, and to enable them to charge the enemy without being exposed to confusion and disorder. It must be observed, as a general rule, that the intervals or spaces which are between each battalion and squadron belonging to the second *line* should invariably correspond with the ground that is occupied by the battalions and squadrons, which constitute the first *line*; in order that the first *line*, on being forced to fall back, may find sufficient ground to rally upon, and not endanger the disposition of the second *line*, by precipitately crowding on it.

Each line is divided into right and left wings. Each wing is composed of one or more divisions. Each division is composed of one or more brigades. Each brigade is formed of two, three, or four, or more battalions.

Battalions are formed in line at a distance of twelve paces from each other, and this interval is occupied by two or more cannon, which are attached to each battalion. There is no increased distance betwixt brigades, unless particular circumstances attend it. In exercise, should there be no cannon betwixt the battalions, the interval may be reduced to six paces.

Line, *how regulated*. Its regulating body in movement is, in general, the battalion of that flank which is nearest to, and is to preserve the appui, or which is to make the attack. There are very few cases in which the centre ought to regulate, although the direct march of the line in front appears to be the easiest conducted by a battalion of the centre. It is the flank, however, that must preserve the line of appui in all movements in front, if the line is thrown backward or forward, it is generally on a flank point.

It may not be superfluous to remark, that the term *line*, as expressing a military disposition for battle, was not known until the sixteenth century.—Before that period when armies were ranged in order of battle upon three lines; the first *line* was called *advanced guard*, *(avant garde,)* the second, *main body only*, *(corps de bataille,)* and the third, *rear guard*, *(arrière garde.)*—These terms are never used in modern times, except when any army is on its march; when drawn up for action, or in the field for review, *columns*, or *lines* are substituted.

Lines *of support*, are lines of attack, which are formed to support one another. Where there are several, the second should outflank the first, the third the second; the advanced one being thereby strengthened and supported on its outward wing.

Line *of march*. The regular and tactical succession of the component parts of an army that is put in motion.

Lines *of march*, are bodies of armed men marching on given points to arrive at any straight alignement on which they are to form. The general direction of such alignement is always determined before the troops enter it, and the point in that line at which their head is to arrive, must next be ascertained. See *Am Mil. Lib.*

The line is said to be well dressed, when no part is out of the straight alignement. That this may be effected, at the word *dress*, which is given by the commander, it is immediately to commence from the centre of each battalion, the men looking to their own colors, and the correcting officers lining them upon the colors of their next adjoining battalion.

Line-*firings*, are executed separately and independently by each battalion.

Inversion of the line, in formation. This is a manœuvre which ought only to be resorted to on the most urgent occasions, as it is prudent to avoid the inversion of all bodies in line. The inversion is effected by facing a battalion or line to the right about, instead of changing its position by a counter march; sometimes, indeed, it may be necessary to form to a flank with its rear in front. The column with its line in front may arrive on the left of its ground, and be obliged immediately to form up and support that point, so that the right of the line will become the left. Part of a second line may double round on the extremity of a first line, thereby to outflank an enemy. These, and various other movements, may be found necessary, and they can only be practised with safety and expedition by the inversion of the line.

Lines *advancing to engage an enemy*. *Lignes marchant à l'ennemi*, Fr. According to Marshal Puységur, all lines should take the centre for the regulating point of movement, and not the right, as others have maintained. He grounds his opinion upon a known fact, that the more extended a line is, the more difficult it must prove to march by the right. By making the centre the directing portion of the line, more than half the difficulty is removed. To which it may be added, that the centre is more easily discernible from the right and left, than the right is within the just observation of the left, or the left within that of the right.

When the *line* advances it must uniformly preserve a convexity from the centre, so that when it halts, the right and left may have to dress up; but this convexity must be scarcely perceptible. Were the line to be concave on approaching the enemy, a necessity would occur of throwing the wings back, perhaps even of putting several corps to the *right* about, during which operation the whole army might be endangered.

When lines are marching forward they must be occasionally halted: in which cases the centre halts first, and when the line is ordered to advance again, the centre steps off though in an almost imperceptible manner, before the right and left. Each commanding officer must place himself in the centre of that proportion of the line which he has under his immediate orders, unless he should be otherwise directed. The centre is always the most convenient point, from whence every thing that passes on the right and left may be observed. When the line advances in charging order, he must march at the head of his battalion or squadron, taking care, that he is followed by his troops with an equal cadenced step, and regulating his own movement by that of the divisions which are formed on his right and left. The greater the extent of line proves, which is composed of several battalions and squadrons that advance forward with the same front, the more difficult will be the movement of the several bodies; but as we have already observed, a great part of this difficulty is overcome when the centre is made the directing body. The right and left must be invariably governed by it.

Retiring Line, are bodies of armed men that have advanced against an opposing enemy in order of battle, withdrawing themselves with regularity from the immediate scene of action. On this occasion it is of the greatest importance, that the line should be correctly dressed before it faces to the right about; and the battalions will prepare for the retreat in the manner prescribed for the single one by receiving the caution, that the *line will retire*.

To form the Line, in land tactics, is to arrange the troops in order of battle, or battle array.

To break the Line, to change the direction from that of a straight line, in order to obtain a cross fire.

Turning out of the Line, in a military sense. The line turns out without arms whenever the general commanding in chief comes along the front of the camp.

In the British army the following is the usage:

When the *line* turns out, the private men are drawn up in a line with the bells of arms; the corporals on the right and left of their respective companies: the piquet forms behind the colors, with their accoutrements on, but without arms.

The serjeants draw up one pace in the front of the men, dividing themselves equally.

The officers draw up in ranks, according to their commissions, in the front of the colors; two ensigns taking hold of the colors.

The field officers advance before the captains.

The camp colors on the flanks of the parade are to be struck, and planted opposite to the bells of arms; the officers espontoons are to be planted between the colors, and the drums piled up behind them; the halberts are to be planted between, and on each side the bells of arms, and the hatchets turned from the colors.

Full or close Lines, (*lignes pleines*, Fr.) Marshal Puységur in his *Art de la Guerre* is a strong advocate for full or *close lines*, in his disposition of the order of battle, provided the ground will admit it. He proposes, in fact, that the battalions of infantry and the squadrons of horse should form one continuity of line, without leaving the least interval between them.

Lines *that are close and open*, (*lignes tant pleines que vuides*, Fr.) When troops are drawn up in order of battle with intervals between the battalions and squadrons, the lines are said to be *close and open*.

Line, *or camp courts-martial*. These courts-martial are frequently resorted to, and differ from regimental ones, in as much as they are composed of the officers belonging to different corps, and the ratification of the sentence is vested in the general or commanding officer of the camp. So that no time is lost in waiting for the commander in chief's approbation, when he is delegated by him; nor has the colonel or commanding officer of the regiment to which the offender may belong, any power to interfere. The sentences of line or camp, field, and garrison courts-martial, are confined to corporeal punishments, but they can neither affect life, nor occasion the loss of a limb. The proceedings are read by the adjutant of the day; the surgeon is from the regiment to which the prisoner belongs, and the punishment is inflicted in front of the piquet by the drummers of the different corps under the direction of the drum-major, who is from the regiment to which the adjutant of the day belongs. Field and drum-head courts-martial, may be considered in the same light, when an army is on its march; with this difference, that the prisoner is tried either by officers belonging to his own corps, or by a mixed roster. A circle is formed at a short distance from the men under arms, and the sentence is written upon a drum-head; whence the appellation of drum-head courts-martial is derived. When there are several regiments present, the same forms are attended to in punishing prisoners as are observed in line or camp courts-martial; and when there is only one regiment, the examination and the punishment of the prisoner or prisoners take place within itself.

Lines, in fortification, bear several names and significations; such as,

Line *of* {
defence
defence fichant
defence razant
circumvallation
countervallation
counter-approach
defence prolonged
}
Line *Capital* - - - } See Fortification.

Line *of communication*. (*Ligne de communication*, Fr.) That space of ground in a fortified place which joins the citadel to the town.

Lines *of communication*, are trenches that unite one work to another, so that men may pass between them without being exposed to the enemy's fire: thence the whole intrenchment round any place is sometimes called a *line of communication*, because it leads to all the works.

Inside Lines, are a kind of ditches towards the place, to prevent sallies, &c.

Outside Lines, are a kind of ditches towards the field, to hinder relief, &c.

Capital Line *of the half moon*. (*Ligne capitale de la demi-lune*, Fr.) That which is drawn from the flanked angle of a half moon, to the rentrant angle of the counterscarp on which it is constructed.

Line *of counter approach*. (*Ligne de contre-approche*, Fr.) A sort of trench which the besieged make, and push forward from the glacis, for the purpose of counteracting the enemy's works. See Approaches.

Line *of defence*. (*Ligne de défense*, Fr.) See Fortification.

Ligne *magistrale*, Fr. See *Capital line in* Fortification.

Line *of circumvallation*. (*Ligne de circonvallation*, Fr.) See Fortification.

Line *of direction* in gunnery, is a line formerly marked upon guns, by a short point upon the muzzle, and a cavity on the base ring, to direct the eye in pointing the gun.

Line *of distance*, the interval between two things, either in regard to time, place, or quantity.

Line *of gravitation*, of any heavy body, is a line drawn through its centre of gravity, and according to which it tends downwards.

Line *of swiftest descent*, of a hea- body, is the cycloid. See Cycloid.

Line *of projectile.* See **Projectiles.**

Line *of the least resistance, (ligne de moindre resistance,* Fr.) that line, which being drawn from the centre of the furnace or the chamber of a mine, takes a perpendicular direction towards the nearest superficial exterior.

Line *of fire, (ligne de feu,* Fr.) in fortification. This term admits of two distinct acceptations; first, when it is found necessary to give an idea of the manner in which a rampart, or an entrenchment overwhelms and crosses any space of ground by the discharge of ordnance or musquetry, lines must be drawn to express the distances which have been traversed by the shot, &c. These lines are called lines of fire, being an abbreviation of those lines of direction which have been given to the shot.

In order to convey a more just and accurate conception of this species of line of fire, it is recommended to give a profile, which shall not only shew the curves of the trajectories, but likewise point out the intersections and impressions which have been made by such fire upon a rampart, entrenchment, ground, or fortification of any description.

In the second place, all that extent of a rampart or entrenchment, from whence the shot of ordnance or musquetry is discharged, is understood to be a line of fire.

If, for instance, it were to be said that a reserve or oblique direction was taken against a long extent of rampart or entrenchment, by means of a *jettée* or any great work thrown up, so as to out-flank or take it in the rear, it might be concluded that those points would be supplied with a long line of fire.

Line *of direction, (Ligne de direction,* Fr.) In mechanics any straight line down which a heavy body descends. There are likewise lines of direction which relate to powers; they are then straight lines by means of which a power draws or urges on a weight for the purpose of supporting or moving it.

Capital **Line** *of the bastion, (Ligne capital du bastion,* Fr.) a line which is drawn from the centre angle of a bastion to its flanked angle. In regular fortification this line cuts the bastion in two equal parts.

Lines *of entrenchment, (Lignes retrenchées,* Fr.) all lines which are drawn in front of a camp, &c. to secure it from insult or surprize are so called. Whenever an army is not sufficiently strong to run the hazard of being attacked, the general who commands it, must have the precaution to dig a ditch in front measuring three toises at least in breadth and two in depth. He must likewise throw up a parapet with redans, or have it flanked at intermediate distances by small bastions two toises thick, made of strong close earth, and get it covered and supported by fascines, with a banquette behind sufficiently high to cover the soldiers tents. If water can be got into the ditch from a neighboring stream or rivulet, an additional advantage will be derived from that accession. When the *lines* are constructed for any space of time, it will then be proper to make a covert-way in the usual manner.

Other *lines* are likewise constructed for the purpose of communicating with different quarters; great care must be taken lest any of them be exposed to the enemy's enfilade. To prevent this they must be supported by redoubts, or by works belonging to the neighboring forts; for the enemy might otherwise make good his ground within them, and use them as a trench.

If an army is so weak as to be within *lines*, you take care to have communications between the villages, and small parties of light horse patroling towards the enemy, and to have videttes and sentries posted so near one another, that you may have intelligence of all their transactions.

Line *in fencing,* that part of the body opposite to the enemy, wherein the shoulders, the right arm, and the sword, should always be found; and wherein are also to be placed the two feet at the distance of 18 inches from each other. In which sense, a man is said to be in his line, or to go out of his line, &c.

Line, also denotes a French measure, containing 1-12th part of an inch. It is of late frequently made use of in calculations.

Line of Science, is substituted for the old and awkward oblique step; movements to a flank oblique are now by *half* or *quarter facing*, that is, the whole who are to move in the required direction are faced on a line midway between a front and full faced position; so that *quarter faced* to the right, the right shoulder of the second man is behind the left shoulder of the right file; and so on each along each rank have their right shoulders behind the man on their right: so if the movement is to be oblique to the left, they are quarter faced to the left, and the files will stand successively with their left shoulders in the rear of the right of those who stood on their left.

To **Line**, from the French *aligner*, is to dress any given body of men, so that every individual part shall be so disposed as to form collectively a straight continuity of points from centre to flanks.

To **Line** *men.* Officers, and non-commissioned officers, are said to line the men belonging to their several battalions, divisions, or companies, when they arrive at their dressing points, and receive the word *dress* from the commander of the whole.

When a single battalion halts, it is dressed or lined on its right centre company, and must of course be in a straight line. When several battalions dress from the centre of each on its next colors, the general line will be straight, provided all the colors have halted regularly in a line. On these occasions every thing will depend upon the two centre guides of each battalion.

To Line *a Coast.* To line a coast well under the immediate pressure of invasion, requires not only great ability and exertion in the commanding officer of the particular district against which an insult may be offered, but it is moreover necessary, that every individual officer in the different corps should minutely attend to the particular spot on which he may be stationed. The English coast, especially where there are bays, is almost always intersected by narrow passes through the rocks or sandhills. On this account, when any body of men receives orders to line a specified extent of ground, the officers who are entrusted with the several parts of a battalion or brigade, should take care to make the most of their men, and to extend their files in such a manner, as not only to present an imposing front from the crown of the hill, but to be able, at a moment's warning, to carry their whole strength to prevent the enemy from getting upon the flanks by suddenly rushing up the gap. Much coolness is required on these occasions.

To Line *hedges*, &c. to plant troops, artillery, or small arms, along them under their cover, to fire upon an enemy that advances openly, or to defend them from the horse, &c.

To Line *a street or road*, is to draw up any number of men on each side of the street or road, and to face them inwards. This is frequently practised on days of ceremony, when some distinguished person is received with military honors on his way through places where troops are stationed.

This is the usage also in funerals, when the corps under arms form a lane, by the ranks being faced to the *right and left inward;* and the party *rests on arms reversed.*

To Line, in a fortification, is nothing more than to environ a rampart, parapet, or ditch, &c. with a wall of masonry or earth.

LINCE, *et chaussure du soldat*, Fr. necessaries belonging to a soldier. During the monarchy of France, a sol or one English half-penny per day, was added to the pay of each serjeant, and about six deniers or three English farthings to that of each corporal, anspessade or lance-corporal, grenadier, private soldier, and drummer, to enable them to keep up a certain list of necessaries. On any deficiency being discovered it was in the power of the commanding officer of the regiment to reduce the soldier's subsistence to four sols or two-pence English per day, until the full complement was made up.

LINGERER, one who pretends to be indisposed, in order to avoid his tour of duty—a skulker. Hence the term malingerer, or a soldier who avoids duty in a disreputable manner.

To LINK *together*, to tie together. Cavalry horses are frequently linked together when it is found necessary for the men to dismount. When the word of command *link your horses* is given, the right hand files are to move up into the intervals, slip their bridoons and dress by the right, standing in front of their own horses' heads; the left files slipping the bridoons in their hands at the same time, and stepping to the front of their horses' heads. As soon as up and dressed, the whole advance their left feet by a motion from the right, and by another motion from the right, the whole go to the left about together, and link; as soon as done linking, the left hand man of each rank falls back two paces from his horse, and the whole dress well to him, with the carabine in the trailing position. But before they do this they must put their belts and plates in order.

It ought to be recollected, that when the right hand files come up, they must take care not to bring their horses past the others; and in order to dress with the left files they must slip the bridoon to the left hand, leaving the horse in his place in the rank.

When dragoons are ordered to dismount, and are to mount again immediately, without moving from their horses, the word of command *unlink your horses* is made use of; in which case the dragoon drops his carabine, which is then in a trailing position, on his left arm, and unlinks: as soon as that is done, he takes his carabine in his left hand, the horse in the right, by the right bridoon rein, waiting for the word *prepare to mount.*

LINKS, in the art of war, are distinct reins, or thongs of leather used by the cavalry to link their horses together, when they dismount, that they may not disperse. Every tenth man is generally left to take care of them.

LINS-*pins*. See Linchpins.

LINSTOCK. (*Boute-feu*, Fr.) In gunnery, a short staff of wood, about three feet long, having at one end a piece of iron divided into two branches, each of which has a notch to hold a lighted match, and a screw to fasten it there, the other end being shod with iron to stick into the ground.

LIS, *Fr*. A warlike machine was formerly so called: it consisted of a piece of wood or stake, about the size of the human body, which was made smaller at the top than at the bottom, and resembled a lilly not yet blown. Several of these were tied together with ozier or willow twigs, and were used for the security of a camp. They were not unlike the palisades of the present day.

Fleur de Lis, *Luce*, Fr. A flower borne in the ancient arms of France, and adopted by the English kings until the Frenc insisted on its abandonment, which w done on the consummation of the union with Ireland. The electoral cap, as emblematic of Hanover, and the shamrock for Ireland, have been substituted in their stead.

Fleur-*de-Lis*, during the French monarchy signified also a mark of infamy, which was made with a hot iron, upon the back of a malefactor.

LISSE, *Fr.* Any smooth and unornamented piece in architecture is so called by the French.

LISSOIRE, *Fr.* from *lisser* to smooth. This word was particularly applied in France to an operation which gunpowder went through in order to make coarse grains smooth and round. This was effected by tying several barrels together and by means of a mill, turning them round. so as to occasion considerable friction within.

LISTS, in a military sense, a place inclosed, in which combats are fought.

To enter the Lists, is to contend with a person.

To List *soldiers,* } to retain and enroll
To inlist, } soldiers, either as
volunteers, or by a kind of compulsion.

LISTING. Persons listed, are to be carried before the next justice of peace or magistrate of any city or town and sworn.

Persons, owning before the proper magistrate, that they voluntarily listed themselves, are obliged to take the oath, or suffer confinement by the officer who listed them, till they do take it.

The magistrate is obliged in both cases, to certify, that such persons are duly listed; setting forth their birth, age, and calling, if known; and that they had taken the oath.

Persons receiving inlisting money from any officer, knowing him to be such, and afterwards absconding, and refusing to go before a magistrate to declare their assent or dissent, are deemed to be inlisted to all intents and purposes, and may be proceeded against as if they had taken the oath. See Attestation.

LIT *de* CAMP, *Fr.* A camp bed, which takes to pieces, and is portable. The French frequently call it *lit brisé*, or a bed which may be taken to pieces. The Turks never use these beds; they always carry mattrasses, which they spread upon sophas when they halt at night.

LITTER, a sort of hurdle-bed, on which wounded officers or men are carried off the field.

Little *fortification.* The first division of the first system of M. de Vauban, and is so called when the exterior side of a fortification does not exceed 175 toises, or 350 yards. It is used in the construction of citadels, small forts, horn and crown-works.

LIVRE An old French money of account, consisting of 20 sols, about 18*d.* English: each sol containing 12 deniers. The livre is of two kinds, Tournois and Parisis.

Livre *Tournois* contains 20 sols Tournois, and each sol 12 deniers Tournois.

Livre *Parisis*, is 12 sols Parisis, being worth 12 deniers Parisis, or 15 deniers Tournois; so that a livre Parisis is worth 25 sols Tournois. The word Parisis is used in opposition to Tournois, because of the rate of money, which was one-fourth higher at Paris than at Tours.

LIVRER *bataille*, Fr. To deliver, give or join battle.

Livrer *assaut*, Fr. To storm.

Livrer, *une ville au pillage*, Fr. to give a town up to plunder.

LOAD, a word of command given, when men are to charge their guns or musquets.

Load. Artillery carriages, or waggons, are frequently loaded with 14 cwt. for 3 horses, and 20 cwt. for 4 horses. This, however it may answer on an English road, is a great deal too much for general service. No doubt a carriage of one construction will travel easier than of another, with the same weight; and where the mechanical advantage thus gained is greatest, the heaviest weight may be put, with the same number of horses; but in the carriages usually made for the service of artillery, 4 cwt. per horse, beside the weight of the carriage, is the utmost they ought to be allowed to draw.

The French ammunition waggons, which are drawn by 4 horses, are always charged with 1200 pounds only.

The regulations for British home service in 1798 state the load for a bread waggon at 2400 lbs. and for a cart of entrenching tools at 400 lbs. Men used to bear loads, such as porters, will carry from 150 to 250 pounds.

A horse will carry about 300 lbs. and a mule about 250 lbs. See also the word Horses.

LOCHABER-AXE, a tremendous Scotch weapon, now used by none but the town guard of Edinburgh; one of which is to be seen among the small armory in the tower of London.

LOCKS, in gunnery, are of various sorts; common for lockers in travelling carriages, or for boxes containing shot, powder, or cartridges. Also locks for fire arms, being that part of the musquet, by which fire is struck and the powder inflamed.

LOCK-STEP. This step was first introduced into the British service by the Elliot Lord Heathfield, when he commanded the garrison at Gibraltar; and is the same that general Saldern (from whose works all the British regulations have been almost literally selected) calls the *deploy step*. This step consists in the heel of one man being brought nearly in contact with the joint of the great toe of another, so that when men step off together they constantly preserve the same distance. The lock or deploy step was always practised when a battalion marched in file or close column; and the great advantage to be derived from it was, that the last file gained ground at the same tim that the front advanced. It is now exploded, and very properly, as an excessive absurdity.

To Lock, is to fasten one or more of the wheels of a carriage from going round, in going down a hill, &c.

To Lock *up*, to take the closest possible order in line or in file. The expression is derived from the lock-step.

Lock *up!* a word of command which is frequently used in the British service, to direct soldiers to take or preserve the closest possible order, especially in *file-marching*.

LOCKER *hinges*, serve to fasten the cover of the lockers in travelling carriages.

LOCKING *plates*, in artillery, are thin flat pieces of iron nailed on the sides of a field carriage, where the wheels touch it in turning, to prevent the wearing the wood in those places. See Carriage.

LOCKSPIT, in field fortification, a small cut or trench made with a spade, about a foot wide, to mark out the first lines of a work.

To LODGE ARMS. A word of command which is used on guards and pickets. When a guard has closed its ranks, and the men are to place their arms in front of the guard-house or quarter-guard, according to circumstances, the commanding officer gives the words *port arms*, *to the right or right about*, (as the case may be) *face. Lodge Arms.*

LODGMENT, in military business, is a work made by the besiegers in some part of a fortification, after the besieged have been driven out, for the purpose of maintaining it, and to be covered from the enemy's fire. It also means possession of an enemy's works.

When a *lodgment* is to be made on the glacis, covert way, or in a breach, there must be a great provision made of fascines, sand bags, gabions, wool packs, &c. in the trenches; and during the action, the pioneers (under the direction of an engineer) with fascines, sand bags, &c. should be making the lodgment, in order to form a covering, while the grenadiers are storming the covert way, &c.

LOGARITHMS, the indexes of the ratios of numbers, one to another; of which the following is a concise account.

Of arithmetical progression—By arithmetical progression is meant a series of terms, each of which exceeds, or is exceeded by, that which precedes it by the same given number.

For instance, the series 1. 3. 5. 7. 9. 11 is in arithmetical progression, since each of the terms exceeds that which precedes it by the same number, which is 2. The series 11 . 9 . 7 . 5 . 3 . 1 is also in arithmetical progression, since each of the terms is exceeded by that which precedes it, and by the same number.

Of geometrical progression.—Geometrical progression is that in which each term of a series contains the preceding term, or is itself contained in it, the same number of times throughout.

For instance, the series 1 . 3 . 9 . 27 . 81. 243, &c. is in geometrical progression, since each term contains that which precedes it the same number of times, which is 3.

The series 243 . 81 . 27 . 9 . 3 . 1 is also in geometrical progression, each of the terms being contained by the preceding the same number of times.

Of the formation of logarithms.—Logarithms are numbers in arithmetical progression, corresponding, term by term, with a similar series of numbers in geometrical progression. If, for instance, we have a geometrical series and an arithmetical series as follows,

1 . 3 . 9 . 27 . 81 . 243
1 . 3 . 5 . 7 . 9 . 11

we shall call each term of the lower series the logarithm of the corresponding term in the upper series.

Any given quantity may therefore have an infinite number of different logarithms, since the same geometrical progression may be made to correspond with an infinite diversity of series in arithmetical progression.

In the formation, however, of tables of logarithms, it has been found convenient to adopt a ten-fold progression, as the geometrical progression, and the series of natural numbers as the arithmetical progression. It will be remarked, that, in respect to the latter, the ratio, or common measure of increase, is always unity, while the former has the advantage of being adapted to the mode of notation which is in universal use. The following, therefore, are the progressions chosen:

1.10.100.1000.10000.100000.1000000
0.1 .2 . 3 . 4 . 5 . 6

It follows from the nature and correspondence of these progressions, that, as often as the ratio of the former may have been used as a factor in the formation of any one of the terms of that progression, so often will the ratio of the second progression have been added to form the corresponding term of this identical second progression. For instance, in the term 10000, the ratio 10 is 4 times a factor, and in the term 4 the ratio is added 4 times.

If any two terms of the geometrical progression be intermultiplied, and if the corresponding terms of the arithmetical progression be added, the product and the sum will be two terms which will correspond with each other in the same progressions.

Upon this principle it is, that, by the simple addition of any two or more terms of the arithmetical progression, we can ascertain the product of the corresponding terms of the geometrical progression.

For instance, by adding the terms 2 and

3 which answers to 100 and 1000, I have 5, which answers to 100000; whence I conclude that the product of 100 by 1000 is 100000, which in fact it is.

It is always easy to ascertain the logarithum of unity followed by any given number of ciphers; for such logarithm will invariably be expressed by as many units as there may be ciphers in the given number. In order to extend this practice to the formation of intermediate logarithms, it may be conceived, that, although any given number, for instance 3, may not apparently form any part of the geometrical progression 1 . 10 . 100, yet if we were to insert a great number of geometrical means, suppose 1,000,000, between the two first terms, we should either find the number 3 itself, as one of such means, or a number of very near approximation to it. The intermediate terms between 10 . 100 and between 100 . 1000 might be found in like manner, as well as a corresponding number of intermediate terms, in arithmetical proportion, between 0 and 1, and between 1 and 2, 2 and 3, &c. The whole of the geometrical terms being then arranged upon the same line, and the whole of the arithmetical terms upon another line, under the former, it is obvious that the lower series would contain units, or decimal fractions, corresponding with the numbers in the upper series, or, in other words, the logarithmic relation of the two series would be complete and exactly similar to that of the fundamental progressions.

It is thus, that, in the tables most in use, the number of decimal places in the logarithmic quantities is 7, than which, however, many more are used by men of science with a view to the attainment of a corresponding degree of precision. Nevertheless, in certain tables which were made a few years ago for the use of accompting houses, the number of decimal places is reduced to 5, and the rather, as a greater degree of precision is not necessary in those calculations of business which do not require more than approximate results.

It should be remarked, in respect to the tables of logarithms, that the first figure to the left of each logarithm is called *the characteristic*; since it is that figure which denotes the class of the geometrical progression which comprises the number to which the logarithm relates. For instance, if the characteristic of a number be 2, I know that it relates to the second class, or the hundreds, the logarithm of 100 being 2; and, as that of 1000 is 3, every number from 100 to 999 inclusively, cannot have any other logarithm than 2 and a decimal fraction.

Thus, the characteristic of a logarithm is a number corresponding to the natural numbers, namely, 1 to 10, 2 to 100, 3 to 1000, 4 to 10000, &c. &c. The characteristic of the logarithm of any number under 10 is 0.

It happens by this progressive correspondence, that a number being 10 times, 100 times, or 1000 times greater than another number, has the same logarithm as the lesser number, as far as relates to the decimal fractions of each. The characteristic alone is susceptible of variation, as will be seen by the logarithms of the following numbers:

Numbers	Logarithms
3	0,47712
30	1,47712
300	2,47712
3000	3,47712

the characteristics of which are separated by a comma, being 0, 1, 2, 3.

It is this property by which the extraction of logarithms is facilitated, since, if we know the logarithm of the number 30, and are desirous of finding that of 300, of 3000, or of 3, it is requisite merely to add to the characteristic of 30, or to deduct from it, as many units as there may be more or less ciphers in the number whose logarithm is sought.

LOGEMENT, *Fr.* means generally any place occupied by military men, for the time being, whether they be quartered upon the inhabitants of a town, or be distributed in barracks. When applied to soldiers that have taken the field, it is comprehended under the several heads of huts, tents, &c.

LOGIS, *Fr.* Quarters.

Marquer les LOGIS, *Fr.* To mark the officer's rooms according to their respective ranks.

LOGEMENT *d'une attaque*, Fr. See *Lodgment in* FORTIFICATION.

LONG BOAT, the largest boat belonging to a ship: it serves to bring goods, provisions, &c. to or from the ship, to land men, to weigh the anchor, &c.

Le long de la Côte, *Fr*, Along the coast.

Tout du long de l'année, Fr. All the year round.

Long à la guerre, Fr. An expression used in the French service.

Faire long-bois signifies to leave a considerable opening between the ranks.

Prendre le plus long, Fr. To go the furthest way about, as *L'armée fut obligée de prendre le plus long pour éviter les défilés*; the army was under the necessity of going the furthest way about in order to avoid the defiles.

LONGER, *Fr.* A French military phrase. *Longer la riviere.* To move up or down the river. It is frequently found necessary to attack an enemy's post, in order to have a free passage on the river, *pour longer la riviere.*

Longer le bois, Fr. To march by the side of a wood.

Faire une LONGUE *marche*, Fr. To make a long march.

Epee de longueur, Fr. A sword of a proper length to serve as a weapon of defence. This term is used to distinguish it from the short swords, which are worn for mere dress or parade.

Longs-costes, Fr. Those sides are so

called, which belong to places that are irregularly fortified, and contain indiscriminately eighty toises and upwards. In which cases they are usually strengthened by a flat bastion in the centre, or by several flat bastions, which are constructed, according to the extent of the sides, at intermediate distances.

LONGIMETRY, (*Longimetrie*, Fr.) The art of measuring lands and distances, whether the extent or space be accessible as in a road, or inaccessible as in a river, or branch of the sea.

LONGITUDE *of the earth*, denotes its extent from west to east, according to the direction of the equator.

Longitude *of a place*, in *geography*, its distance from some first meridian, or an arch of the equator intercepted between the meridian of the place, and the first meridian. See Geography.

Longitude *of motion*, according to some philosophers, is the distance which the centre of any moving body runs through, as it moves on in a right line. See Motion.

LONGRINIS, *Fr.* Pieces of wood or branches which are laid along the extent of a sluice, and make part of its grating.

To LOOK, a word frequently used in the British service to express the good or bad appearance of a corps, &c. viz. such a regiment looks well or ill under arms.

To Look *at*. To go down the front of a regiment, &c. without requiring that the troops should be put through the different evolutions. A general officer frequently looks at a regiment in this manner. Sometimes indeed the expression bears a more extensive meaning: it is usual, for instance, to say—It would be ridiculous to think of looking at a strong place for the purpose of attacking it, without having sufficient force to carry its works.

To be Looked *at*, in a military sense to be distantly observed by an enemy who has a design of attacking you; or to be seen by a general officer, whose duty is to enforce any established system. The latter must be considered as a mere cursory inspection. It is common to say—We are to be seen or looked at, but not regularly reviewed.

LOOP, in a *ship-carriage*, made of iron, fastened one on the front of a fore axle-tree, and two on each side, through which the ropes or tackle pass, whereby the guns are moved backwards and forwards on board of ships.

Loop, a small iron ring or staple, by which the barrel of a gun is affixed to the stock.

Loop is likewise used to signify an ornamental part of a regimental hat.—Every officer in the British service, when dressed in his uniform, is directed to wear a hat, the loop of which is made of scaled silver or gold, if in the cavalry; and of gold lace if in the infantry. General officers wear the scaled loop.

Loop-*holes*, (*Crénaux*, Fr.) In fortification, are small holes in the walls of a castle or fort, through which the garrison may fire. In field fortification, loop-holes are frequently resorted to.

To LOOSEN, to separate, to make less coherent. In a military sense it implies to open ranks or files from close order. In marching by files, the officers and non-commissioned officers should be particularly attentive to their men, especially when any particular manoeuvre requires a compact and solid movement. To loosen is, in fact, to lose that firm continuity of line or perpendicular adherence, which constitutes the true basis of military operations. The lock step was introduced for the purpose of counteracting the mischievous effects of loose marching, but it produced a greater inconvenience, and has therefore been laid aside; and the equal pace and marked time corrects both.

LOOT. Indian term for plunder or pillage.

LOOTIES or LOOTEES, *Ind.* A term in India to express a body of irregular horsemen, who plunder and lay waste the country, and harass the enemy in their march. They may be compared to the Hulans of Europe, and other freebooters.

LOOTYWALLOW, *Ind.* A term of the same import as Looties.

To LOT *for men*, a phrase peculiar to military arrangements. When recruits join they should be lotted for with the strictest impartiality. If some troops or companies should be less effective than others, they must be first completed to the strength of other troops or companies, and then the whole must lot equally.

LOUIS, *or Knight of St. Louis*, the name of a military order in France, instituted by Louis XIV. in 1693. Their collars were of a flame color, and passed from left to right: the king was always grand master.

LOUIS d'OR. A French coin first struck in the reign of Louis XIII. in 1640; but laid aside since the revolution.

LOUP, *Fr.* literally signifies a wolf.

Loup *des anciens* was an iron instrument, made in the shape of a tenaille, by means of which they grappled the battering rams and broke them in the middle. See Crows-Feet.

LOYAL. By a misapplication of terms has been perverted from its true signification, a person faithful to the *law*, *loi*, is *loyal*; it is made to signify, a person who, whether he regarded the *law* or not, was called loyal if he supported a king. Hence during the revolutionary war a regiment was formed, called *Loyal American*.

Loyalists. During the American war several Americans who betrayed their country, served in the British army; and at the conclusion of it many went over to England and received compensations for their perfidy to their country. The allowances made on this occasion were not, however, confined to those that had served; several families had their cases taken into consideration, and were provided for by the British government. These compensations did not however give any right to a military man to avail himself of the allowance on the score of half-pay; many of these persons have been since used as spies.

LUMIERE, *Fr.* Vent, touch-hole, aperture.

Lumiere *des pieces d'artillerie, des armes à feu, et de la plûpart des artifices,* Fr. the vent or aperture through which fire is communicated to cannon, fire-arms, and to almost every species of artificial fireworks. In the making of cannon, it is of the utmost consequence to pay minute attentention to the vent or touch-hole. It is in this part that pieces of ordnance are generally found defective, from the vent being too much widened by repeated firing, and the explosion of the gunpowder being necessarily weakened.

LUNETTE *d'approche,* Fr. a telescope. The French sometimes call them *Lunettes de Galilèe,* from the perspective glass or telescope having been invented by Galileo.

Lunette *à facettes,* Fr. a multiplying glass.

Lunette *polyèdre.* Fr. a magnifying glass.

Lunette *à puce,* Fr. a microscope.

Lunettes, in *fortification,* are works made on both sides of the ravelin: one of their faces is perpendicular to half or two thirds of the faces of the ravelin; and the other nearly so to those of the bastions.

Lunettes, are also works made beyond the second ditch, opposite to the place of arms: they differ from the ravelins only in their situation. See Fortification.

LUNETTONS, are a smaller sort of *lunettes.*

LUNGER-CONNA. A poor-house or hospital is so called in India.

LUNT. The matchcord with which cannon, &c. are fired.

LUNULÆ. (*Lunules,* Fr.) In geometry a half moon or crescent, which is made by the arcs of two intersecting circles. If you inscribe a triangle-rectangle within a half circle, the diameter of which becomes the hypothenuse; and if upon each side that compresses the right angle, as its diameter, you describe a half circle, the space in shape of a half moon, closed in by the circumference of each of these two circles, and by a part of the circumference of the great half circle, will form the figure called Lunula.

LUTTE, *Fr.* Struggle. An exercise of the body, which consists in a full exertion of all its muscular powers to overcome another body, that resists with equal force and pertinacity. This sort of exercise was much encouraged among the ancients. The wrestlers or *lutteurs,* were distinguished by the name of athletics.

LUXHEBAR. The Indian name for Thursday.

LUZERNE, *Fr.* Spanish trefoil, called likewise in English *Lucerne.* A species of hay, which is cultivated for the subsistence of horses. It bears a violet colored flower.

LYCANIANS, (*Lycaniens,* Fr.) A militia that was formerly raised in Sclavonia, the troops of which resemble the *Pandours* and *Warasdins.* It derives its name from being quartered in the neighborhood of the lordship of *Lyka.*

LYING, to be actually stationed or quartered in a given place.

In-Lying. This term is peculiarly applicable to pickets. A picket is said to be an *In-lying picket* when it is confined within the immediate lines of entrenchments belonging to a camp, or within the walls of a garrisoned town.

Out-Lying *picket,* is that which does duty without the limits of a camp or garrisoned town; that is, beyond the immediate sentries belonging to either. Those pickets are likewise called *In-line* and *Out-line* pickets.

Out-LYERS, the same as faggots in the line, or among the regulars. The term out-lyers was a term, however, peculiarly understood among the guards; and consisted of a certain number of men from each company, who were permitted to work, on condition that the whole of their pay was left in the hands of the captain, for the time they were so employed. This sum the officer appropriated to his own use, and was thereby enabled not only to increase his pay, but to keep a handsome table whenever he mounted guard. During the winter months the money arising from out-lyers amounted to a considerable sum. This was allowed as a sort of compensation for the expence the captain incurred by the dinner he gave to his subalterns; and for his contribution to the support of a regimental hospital. The custom is now abolished, as a table is kept by the king, and copiously paid for out of the civil list. The following anecdote, which is related to have occurred in the company that once belonged to the British general Gansell, (whom Junius notices in his letters) will shew the absurdity of the old custom, and the wisdom of its abolition:—A general muster being ordered, it was remarked that a soldier dressed in new regimentals, and perfectly unknown to every man in the company, stood to have his name called over: on being asked to whose company he belonged, he replied, to general Gansell's: (it must be here observed, that the general had quitted the guards for some time.) Who is the present captain? was the next question, or who are the other officers? To which he briefly replied, I only know the pay-serjeant. The fact was, that he had been some years in the guards, and had constantly been an out-lyer.

It was a common practice and continues to be, though not to so great an extent as formerly, to place the names on the muster rolls of the children of officers, often their illegitimate children, and instances have occurred of girls, receiving men's pay as *out-lyers*.

M

MAALER, *Ind.* A certificate, which is attested by the principal inhabitants of a town or village.

MACE. A heavy blunt weapon, having a metal head: a club.

MACHICOULIS, or *Masse-coulis*, Fr. In ancient, and sometimes in modern fortification, that upper part of the wall which is sustained by brackets or corbels, jets out and overlooks the gate or ditch.

When a place is besieged, detached parties of the garrison may be posted in the several machicoulies. Through the intervals of the corbels, or supporting brackets, they may easily observe every thing that passes at the foot of the wall; and if the besiegers should be hardy enough to penetrate as far, they may easily overwhelm them by throwing down large stones, combustible materials, hand-grenades or bombs. These brackets or supporters, which in ancient fortification were of a slight construction, might be made of solid materials. The machicoulis, in fact, is susceptible of great improvement; and in many instances might be adopted in order to defend the lower parts of angular forts or turrets.

MACHINES. *Machines*, Fr.

Machines *used in war by the ancients*. Every species of instrument or machine, which was employed before the invention of fire-arms, for the purpose of demolishing the fortifications of an enemy, or of rendering them accessible to the besieger, came under the denomination of machine. For a full and elaborate explanation of the different machines that were adopted by the ancients, we refer our military readers to the second volume of the *Recueil Alphabetique*, page 73.

Machines *Infernales*, Fr. Infernal machines. Although the first idea of these machines has been attributed to France, the invention, nevertheless, is by no means new. Frederic Jambelli, an Italian engineer, was the first that used them, when Alexander, of Parma, besieged Antwerp. The prince of Orange likewise had recourse to the destructive effects of an infernal machine, in order to bombard Havre-de-Grace, and to set it on fire. The Dutch and English, in conjunction, attempted to destroy St. Malo by the same means. The first instance, however, upon record, in which the French made use of this machine, was when Louis the XIVth ordered a vessel, carrying an enormous shell, full of every species of combustible matter, to be dispatched to Algiers, for the purpose of demolishing its harbor. This, the English say, suggested to other nations the adoption of fire-ships, and other destructive machines, which have frequently been used against maritime places, although they had been in use a century before.

The author of *Oeuvres Militaires*, tom. xxii. page 222, speaking of the infernal machines, observes, that if he were to be in a situation which required the use of so dreadful an explosion, especially to destroy a bridge, he would prefer having the machine made simply with different strong pieces of wood joined together, so as to be in the shape of an egg, or of a cone reversed. The whole must then be made compact with cords twisted round it. This method, in his opinion, is not only the best, but can be executed in the most easy and expeditious manner. He further adds, that in order to burn and blow up wooden bridges, and even to destroy such as are constructed upon arches, several sorts of barges or boats might be used, which should be filled with fireworks, bombs, petards, &c. It would likewise be extremely easy to construct these machines upon floating rafters, carrying several thousand pounds weight of gunpowder, which might be confined within strong pieces of wood, put together in the manner already described.

These machines should be piled one above the other, and long iron bars must be thrown across the floats, or be fixed like masts, so that when the whole of the combustible materials is beneath the centre of the bridge, the rafters may be stopped. Great care must be taken to dispose the matches in such a manner that no fire may be communicated to the gunpowder before the machine reaches the exact spot which is to be destroyed.

MACHINE, in *general*, whatever hath force sufficient to raise or stop the motion of a heavy body.

Machines are either simple or compound: the simple ones are the seven mechanical powers, viz. lever, balance, pully, axis, and wheel, screw, and inclined plane. See Mechanical Powers.

If the given power is not able to overcome the given resistance when directly applied, that is, when the power applied is less than the weight or resistance given; then the thing is to be performed by the help of a *machine*, made with levers, wheels, pullies, screws, &c. so adjusted, that when the weight and power are put in motion on the *machine*, the velocity of the power may be at least so much greater than that of the weight, as the weight and friction of the *machine*, taken together, is greater than the power; for on this principle depends the mechanism or contrivance of all mechanical engines used to draw or raise heavy bodies, or overcome any other force; the whole design of these being to give such a velocity to the power, in respect of the weight, as that the momentum of the power may exceed the momentum of the weight: for if *machines* are so contrived, that the velocity of the agent and resistant are reciprocally as their forces, the agent will just sustain the resistant, but with a greater degree of velocity will overcome it. So that if the excess of motion or velocity in the power is so great as to overcome all that resistance which commonly arises from the friction or attraction of contiguous bodies, as they slide by one another, or from the cohesion of bodies that are to be separated, or from the weights of bodies that are to be raised: the excess of the force remaining, after all these resistances are overcome, will produce an acceleration of motion thereto, as well in the parts of the *machine*, as in the resisting body.

Compound MACHINES, are formed by various combinations, and serve for different purposes; in all which the same general law takes place, viz. that the power and weight sustain each other, when they are in the inverse proportion of the velocities they would have in the directions wherein they act, if they were put in motion. Now, to apply this law to any compound *machine*, there are four things to be considered: 1. The moving power, or the force that puts the *machine* in motion; which may be either men or other animals, weights, springs, the wind, a stream of water, &c. 2. The velocity of this power, or the space it moves over in a given time. 3. The resistance, or quantity of weight to be removed. 4. The velocity of this weight, or the space it moves over in the same given time.

The two first of these quantities are always in the reciprocal proportion of the two last; that is, the product of the first two must always be equal to that of the last; hence, three of these quantities being given, it is easy to find the fourth; for example, if the quantity of the power be 4, its velocity 15, and the velocity of the weight 2, then the resistance, or quantity of the weight, will be equal to $\frac{4\times15}{2}=\frac{60}{2}=30$.

The following rules will direct the mechanic how he may contrive his *machine*, that it may answer the intended purpose, to the best advantage.

1. Having assigned the proportion of your power, and the weight to be raised, the next thing is to consider how to combine levers, wheels, pullies, &c. so that working together they may be able to give a velocity to the power, which shall be to that of the weight something greater than in the proportion of the weight to the power. This done, you must estimate your quantity of friction; and if the velocity of the power be to that of the weight still in a greater proportion than the weight and friction taken together are to the power; then your *machine* will be able to raise the weight. And note, this proportion must be so much greater, as you would have your engine work faster.

2. But the proportion of the velocity of the power and weight must not be made too great: for it is a fault to give a *machine* too much power, as well as too little; for if the power can raise the weight and overcome the resistance, and the engine perform its proper effect in a convenient time and work well, it is sufficient for the end proposed; and it is in vain to make additions to the engine to increase the power any farther; for that would not only be a needless expence, but the engine would lose time in working.

3. As to the power applied to work the engine, it may either be a living power, as men, horses, &c. or an artificial power, as a spring, &c. or a natural power, as wind, water, fire, weights, &c.

When the quantity of the power is known, it matters not, as to the effect, what kind of power it is; for the same quantity of any sort will produce the same effect; and different sorts of powers may be applied in an equal quantity a great variety of ways.

The most easy power applied to a *machine* is weight, if it be capable of effecting the thing designed. If not, then wind, water, &c. if that can be conveniently had, and without much expence.

A spring is also a convenient moving power for several *machines*: but it never acts equally as the weight does; but is stronger when much bent, than when but a little bent, and that in proportion to the bending, or the distance it is forced to; but springs grow weaker by often bending or remaining long bent: yet they recover part of their strength by lying unbent.

The natural powers, wind and water, may be applied to vast advantage in working great engines, when managed with skill and judgment.—The due application of these has much abridged the labors of men; for there is scarce any labor to be performed, but an ingenious artificer can tell how to apply these powers to execute his design, and answer his purpose; for any constant motion being given, it may, by due application, be made to produce any other motions we desire. Therefore these powers are the most easy and useful, and of the greatest benefit to mankind. Besides, they cost nothing, and do not require any repetition nor renewing, like a weight or a spring, which require to be wound up. When these cannot be had, or cannot serve our end, we have recourse to some living power, as men, horses, &c.

4. Men may apply their strength several ways in working a *machine*. A man of ordinary strength, turning a roller by the handle, can act for a whole day against a resistance equal to 30 pounds weight; and if he works ten hours in a day, he will raise a weight 30lb. 3 1-2 feet in a second;

or if the weight be greater, he will raise it so much less in proportion.

But a man may act, for a small time, against a resistance of 50lb. or more.

If two men work at a windlass or roller, they can more easily draw up 70lb. than one man 30lb. provided the elbow of one of the handles be at right angles to that of the other: and with a fly or heavy wheel applied to it, a man may do 1-3d part more work; and for a little while act with a force, or overcome a continual resistance of 80lb. and work a whole day when the resistance is but 40lb.

Men used to carrying weighty burdens, such as porters, will carry some 150lb. others 200lb. or 250lb. according to their strength.

A man can draw but about 70 or 80lb. horizontally; for he can but apply half his weight.

If the weight of a man be 140lb. he can act with no greater force in thrusting horizontally, at the height of his shoulders, than 27lb.

A horse draws to greatest advantage, when the line of direction is a little elevated above the horizon, and the power acts against his breast: and can draw 200lb. for eight hours in a day, at two miles and an half an hour. If he draws 240lb. he can work but six hours, and not quite so fast; and, in both cases, if he carries some weight he will draw better than if he carried none. And this is the weight a horse is supposed to be able to draw over a pully out of a well. In a cart a horse may draw 1000lb. The most force a horse can exert is when he draws something above a horizontal direction.

The worst way of applying the strength of a horse, is to make him draw or carry up a hill: and three men with 100lb. on their backs, will climb up a steep hill faster than a horse with 300lb.

A round walk for a horse to draw in at a mill, &c. should not be less than 40 feet diameter.

5. Every machine should be made of as few parts, and those as simple as possible, to answer its purpose; not only because the expence of making and repairing will be less, but it will also be less liable to be put out of order.

6. If a weight is to be raised but a very little way, the lever is the most simple, easy, and ready machine; or, if the weight be very great, the common screw is most proper; but if the weight is to be raised a great way, the wheel and axle is a proper power, but blocks and pullies render the labor still more easy: the same may be done by the perpetual screw.

Great wheels, to be wrought by men or cattle, are of most use and convenience when their axles are perpendicular to the horizon; but if by water, &c. then it is best to have their axles horizontal.

7. As to the combination of simple *machines* to make a compound one, though the lever when simple cannot raise a weight to any great height, and in this case is but of little service; yet it is of great use when compounded with others. Thus the spokes of a great wheel are all levers perpetually acting; and a beam fixed to the axis to draw the wheel about by men or horses, is a lever. The lever also may be combined with the screw, but not conveniently with pullies or with the wedge. The wheel and axle is combined to great advantage with pullies: but the perpetual screw, with the wheel is very serviceable. The wedge cannot be combined with any other mechanical power; and it only performs its effect by percussion; but this force of percussion may be increased by engines.

Pullies may be combined with pullies, and wheels with wheels. Therefore if any single wheel would be too large, and take up too much room, it may be divided into two or three more wheels and trundles, or wheels and pinions, as in clock work, so as to have the same power, and perform the same effect.

In wheels with teeth, the number of teeth that play together in two wheels, should be prime to each other, that the same teeth may not meet at every revolution: for when different teeth meet, they by degrees wear themselves into a proper figure: therefore they should so be contrived that the same teeth meet as seldom as possible.

8. The strength of every part of the *machine* should be made proportional to the stress it is to bear: and therefore let every lever be made so much stronger, as its length and the weight it is to support are greater; and let its strength diminish proportionally from the fulcrum, or point where the greatest stress is to each end. The axles of wheels and pullies must be so much stronger as they are to bear greater weight. The teeth of wheels, and the wheels themselves, which act with greater force, must be proportionally stronger; and in any combination of wheels and axles, make their strength diminish gradually from the weight to the power, so that the strength of every part be reciprocally as its velocity. The strength of ropes must be according to their tension; that is, as the squares of their diameters: and, in general, whatever parts a *machine* is composed of, the strength of every particular part of it must be adjusted to the stress upon the whole; therefore in square beams the cubes of the diameters must be made proportional to the stress they bear: and let no part be stronger or bigger than is necessary for the stress upon it; not only for the ease and well going of the *machine*, but for diminishing the friction; for all superfluous matter in any part of it, is a dead weight upon the machine, and serves only to impede its motion: hence he is the most perfect mechanic, who not only adjusts the strength to the stress, but who also contrives all the parts to last equally

well, so that the whole *machine* may fall together.

9. To have the friction as little as possible, the *machine* should be made of the fewest and simplest parts. The diameters of the wheels and pullies should be large, and the diameters of the arbors or spindles they run on, as small as can be consistent with their strength. All ropes and cords must be as pliable as possible, and for that end rubbed with tar or grease: the teeth of wheels must be made to fit and fill up the openings, and cut into the form of epicycloids. All the axles, where the motion is, and all teeth where they work, and all parts that in working rub upon one another, must be made smooth: and when the machine goes, must be oiled or greased.

10. When any motion is to be long continued, contrive the power to move or act always one way, if it can be done, for this is better and easier performed than when the motion is interrupted, and the power is forced to move first one way, and then another; because every change of motion requires a new additional force to effect it. Besides, a body in motion cannot suddenly receive a contrary motion, without great violence: and the moving any part of the *machine* contrary ways by turns, with sudden jerks, tends only to shake the *machine* to pieces.

11. In a *machine* that moves always one way, endeavor to have the motion uniform.

12. But when the nature of the thing requires that a motion is to be suddenly communicated to a body, or suddenly stopped: to prevent any damage or violence to the engine by a sudden jolt, let the force act against some spring, or beam of wood, which may supply the place of a spring.

13. In regard to the size of the *machine*, let it be made as large as it can conveniently; the greater the machine, the more exact it will work, and perform all its motions the better; for there will always be some errors in the making, as well as in the materials, and consequently in the working of the *machine*. The resistance of the medium in some *machines* has a sensible effect; but all these mechanical errors bear a less proportion in the motion of great machines, than in that of little ones; being nearly reciprocally as their diameters, supposing they are made of the same matter, and with the same accuracy, and are equally well finished.

14. For engines that go by water, it is necessary to measure the velocity, drop in pieces of sticks, &c. and observe how far they are carried in a second, or any given time.

But if it flows through a hole in a reservoir, or standing receptacle of water, the velocity will be found from the depth of the whole below the surface.

Thus let $s = 16\ 1\text{-}12$; $v =$ velocity of the fluid per second; $B =$ the area of the hole; $H =$ the height of the water; all in feet. Then the velocity of $v = \sqrt{2sH}$; and its force $=$ the weight of the quantity $\frac{vv}{2s}B$ or HB of water, or $= \frac{62\frac{1}{2}}{112}HB$ hundred weight: because a cubic foot $= 62\ 1\text{-}2$ lb. avoirdup. Also a hogshead is about 8 1-2 feet, or 531 lb. and a tun is 4 hogsheads.

When you have but a small quantity of water, you must contrive it to fall as high as you can, to have the greater velocity, and consequently more force upon the engine.

15. If water is to be conveyed through pipes to a great distance, and the descent be but small, much larger pipes must be used because the water will come slow.

Water should not be driven through pipes faster than four feet per second, by reason of the friction of the tubes; nor should it be too much wire-drawn, that is, squeezed through smaller pipes, for that creates a resistance, as water-way is less in narrow pipes.

16. When any thing is to be performed by a water-wheel, moved by the water running under it and striking the paddles or ladle-boards, the channel it moves in ought to be something wider than the hole of the adjutage, and so close to the floats on every side as to let little or no water pass; and when past the wheel, to open a little, that the water may spread. It is of no advantage to have a great number of floats or paddles; for those past the perpendicular are resisted by the back water, and those before it are struck obliquely. The greatest effect that such a wheel can perform, in communicating any motion, is when the paddles of the wheel move with one-third the velocity of the water; in which case, the force upon the paddle is four-ninths only; supposing the absolute force of the water against the paddle, when the wheel stands still, to be 1: so that the utmost motion which the wheel can generate, is but 4-27ths of that which the force of the water against the paddles at rest would produce.

MADRAS. Fort St. George. A town and fort on the Coromandel coast, in the East Indies, belonging to the English. The town is called Madras by the inhabitants, but by the natives, Chilipatam. It is divided into two towns, the one called the White, and the other the Black town; the former being inhabited by Europeans, and the latter by Gentoos. The diamond mines of Golconda are a week's journey from this place. The town is governed by a mayor and aldermen, with other officers." It is 63 miles north of Pondicherry, lat. 13, 5, N. long. 80, 34, E. It may not be irrelevant to state, that the establishments belonging to Great Britain, on the coast of Coromandel, is divided into several governments, independent of each other. Bombay commands the factories on the western side of the peninsula, commonly called the Malabar coast; together with those in Guzzerat: the establishments and possessions on the eastern or Coromandel coast, are under the government of Madras; and those in Bengal depend on Calcutta.

MADRIERS, are long planks of broad wood, used for supporting the earth in mining, carrying on a sap, making coffers, caponiers, galleries, and various other purposes at a siege; also to cover the mouth of petards after they are loaded, and are fixed with the petards to the gates or other places designed to be forced open. When the planks are not strong enough, they are doubled with plates of iron.

MAGAZIN, *Fr.* magazine.

Petit-MAGAZIN. *Fr.* This was a sort of intermediate building, called entrepot, where stores, provisions, &c. to answer daily consumptions were deposited.

MAGAZIN *d'approvisionnement*, Fr. magazine of stores.

MAGAZIN *d'artillerie*, Fr. gunpowder magazines.

MAGAZINE, a place in which stores are kept, or arms, ammunition, provisions, &c. Every fortified town ought to be furnished with a large magazine, which should contain stores of all kinds, sufficient to enable the garrison and inhabitants to hold out a long siege, and in which smiths, carpenters, wheel-wrights, bakers, &c. may be employed in making every thing belonging to the artillery, as carriages, waggons, &c.

Powder-MAGAZINE, is that place where the powder is kept in very large quantities. Authors differ greatly both in regard to situation and construction; but all agree, that they ought to be arched, and bomb-proof. In fortifications they are frequently placed in the rampart; but of late they have been built in different parts of the town. The first powder magazines were made with gothic arches; but M. Vauban, finding them too weak, constructed them in a semicular form, whose dimensions are, 60 feet long, within; 25 broad; the foundations are eight or nine feet thick, and eight feet high from the foundation to the spring of the arch; the floor is 2 feet from the ground, which keeps it from dampness.

An engineer of great experience some time since, had observed, that after the centres of semicircular arches are struck, they settle at the crown and rise up at the hances, even with a straight horizontal extrados, and still much more so in powder magazines, whose outside at top is formed like the roof of a house, by two inclined planes joining in an angle over the top of the arch, to give a proper descent to the rain; which effects are exactly what might be expected agreeable to the true theory of arches. Now, as this shrinking of the arches must be attended with very ill consequences, by breaking the texture of the cement, after it has been in some degree dried, and also by opening the joints of the voussoirs, at one end, so a remedy is provided for this inconvenience, with regard to bridges, by the *arch of equilibration* in Mr. Hutton's book on bridges; but as the ill effect is much greater in powder magazines, the same ingenious gentleman proposed to find an arch of equilibration for them also, and to construct it when the span is 20 feet the pich or height 10, (which are the same dimensions as the semicircle) the inclined exterior walls at top forming an angle of 113 degrees, and the height of their angular point above the top of the arch, equal to seven feet: this very curious question was answered in 1775 by the Rev. Mr. Wildbore, to be found in Mr. Hutton's *Miscellanea Mathematica*.

Artillery-MAGAZINE, in a *siege*, the magazine is made about 25 or 30 yards behind the battery, towards the parallels, and at least 3 feet under ground, to hold the powder, loaded shells, port-fires, &c. Its sides and roof must be well secured with boards to prevent the earth from falling in: a door is made to it, and a double trench or passage is sunk from the magazine to the battery, one to go in and the other to come out at, to prevent confusion. Sometimes traverses are made in the passages to prevent ricochet shot from plunging into them.

MAGAZINES. The present practice is not to make large powder magazines for batteries, but to disperse the barrels of powder, or cartridges *here* and *there* in small magazines, about 6 or 7 fathoms, in the rear of the battery; as it appears better to lose a small quantity from time to time, than to run the risk of the whole being destroyed, by a single shell falling into the magazine. These small magazines or entrenchments, will hold about one or two tons of powder; and are about eight or 9 feet square. They ought to be well covered from the fire of the place, and always in the rear of one of the merlons. When they cannot be sunk in the ground, they should be secured by sand bags or gabions. They should be made with attention, as should the communication from them to the battery. Two magazines of this kind will be required for a battery of six pieces.

Permanent powder magazines. According to Vauban's plan, powder magazines are commonly made 10 fathoms long, and 25 feet wide, in the clear. The foundation of the longest sides, is 9 or 10 feet thick, and 6 feet or more deep, according to the nature of the ground. The side walls raised upon these are 8 or 9 feet thick; and if there is not to be an upper story, 8 feet will be sufficient height above the foundation. By this means the flooring may be raised above the ground, free from damp, and there will remain 6 feet from the floor to the spring of the arch. The arch is formed of layers of bricks, arched one over the other, and ought to be 3 feet thick at the top. The exterior surface of the arch terminates with an angle at top, like a roof; which angle must be of such magnitude as to make a thickness of 8 feet over the key stone of the arch. The foundation at the gable ends is 5 feet thick, and the same depth as the sides; these ends are built up 4 feet thick, from the foundation to the top of the roof. The long sides are supported by counterforts, 6 feet thick and 4 feet long; and placed 12 feet asunder. The ventilators are placed, one in the centre of each space between the counterforts, and are made with a die across them of 1 1-2 feet. These ventilators are also closed with plates of iron. The magazine is lighted by a window in each end, high up, which are opened and shut by means of a ladder. These windows are secured, each by two shutters, made of plank 2 or 3 inches thick; and the outer one covered with sheet iron, and both fastened with strong bolts. The entrance to the magazine is closed by two doors, one of which opens inwards, and the other outwards; the outward one is covered with sheet iron. The entrance of the magazine should, if possible, be placed towards the south. A wall of 1 1-2 feet thick, and 10 feet high, is built round the magazine at 12 feet distance. A magazine of the above dimensions will contain about 94,800 lbs. of powder, in piles of 3 barrels each; for a greater number piled above each other destroys the barrels, damages the powder, and occasions accidents.

MAGNITUDE, or quantity, any thing locally continued, or that has several dimensions. Its origin is a point, which though void of parts, yet its flux forms a line, the flux of that a surface, and of that a body, &c.

MAGNA CHARTA, the great charter of liberties granted to the people of England in the 9th year of Henry III. and confirmed by Edward I. It is so called on account of the supposed excellence of the laws therein contained; or according to some writers, because another lesser charter, called Charter de Foresta, was established with it; or because it contained more than any other charter, &c. or in regard of the remarkable solemnity in the denouncing excommunications against the infringers of it. It is nevertheless a code of barbarity characteristic of the age; and to which imposture has given it all the consequence which ignorance ascribes to it.

MAHONNE, *Fr.* a species of galeas or double galley which the Turks use. The Venetian galeasses are larger and stronger built.

MAIDEN, an edged instrument used at Edinburgh in former times for the decapitation of criminals. The original invention is by some attributed to an inhabitant of Halifax, in Yorkshire. The guillotine, so called from a French physician of that name, and by which the unfortunate Louis the Sixteenth was executed, January 21st, 1793, owes its origin to the Maiden.

MAIL, primarily denotes the holes or meshes in a net: it likewise signifies a round iron ring. Hence

Coat of Mail, a coat of armor or steel net-work, anciently worn for defence.

MAILLET, *Fr.* a mallet. The French formerly made use of this instrument as an offensive weapon in their engagements.

In 1351 the mallet was used at the famous battle *des Trente* (of thirty) which derived its name from the number of combatants that fought on each side.

This extraordinary combat, holds a distinguished place in the history of Britanny, and was entered into by the partisans of Charles of Blois, and the king of France on one side, and by the count Montfort and the king of England on the other.

Under the reign of Charles VI. a Parisian mob forced the arsenal, took out a large quantity of mallets, with which they armed themselves for the purpose of murdering the custom-house officers. The persons who assembled on this occasion were afterwards called Maillotins.

In the days of Louis XII. the English archers carried mallets as offensive weapons.

MAILLOTIN, *Fr.* an old French term; which signified, an ancient weapon that was used to attack men who wore helmets and cuirasses. A faction in France was distinguished by the appellation of Maillotins.

MAIN *Armée*, Fr. Armed force.—*Entrer a main armée dans un pays*, is to enter into a country with armed men.

Main. *Venir aux mains*, Fr. To come to close action.

MAIN-BATTLE. See Battle-Array.

MAIN-BODY *of the army*, the body of troops that march between the advance and rear-guards. In a camp, that part of the army encamped between the right and left wings.

MAIN-GUARD, or grand-guard, a body of horse posted before a camp for the security of an army. In garrison, it is a guard generally mounted by a subaltern officer and about 24 men. See Guard.

Main-*Guard*. The French observed the following general maxims, with respect to their *Grandes-Gardes* or main-guards. In the first place, every main-guard on foot or horseback, must be so posted as to remain secure of not being surprised and carried off, nor easily forced to abandon its position. In order to accomplish these two objects, it must constantly be within the reach of the different piquets; and, if necessary, those piquets should be readily supported by the army itself.

MAINTAIN, when any body of men

defend a place or post, against the attacks of an adverse party, they are said to *maintain* it.

MAJOR. A superior officer in the army, whose functions vary according to the nature of the service on which he is employed.

MAJOR *of a regiment of foot*, the next officer to the lieutenant-colonel, generally promoted from the eldest captain: he is to take care that the regiment be well exercised, to see it march in good order, and to rally it in case of being broke in action: he is the only officer among the infantry that is allowed to be on horseback in time of action, that he may the more readily execute the colonel's orders.

The MAJOR *of a regiment of horse*, as well as foot, ought to be a man of honour, integrity, understanding, courage, activity, experience, and address: he should be master of arithmetic, and keep a detail of the regiment in every particular: he should be skilled in horsemanship, and ever attentive to his business: one of his principal functions is, to keep an exact roster of the officers for duty; he should have a perfect knowlege in all the military evolutions, as he is obliged by his post to instruct others, &c.

Town-MAJOR, the third officer in order in a garrison, and next to the deputy-governor. He should understand fortification, and has a particular charge of the guards, rounds, patroles, and centinels.

Brigade-MAJOR, is a particular officer appointed for that purpose, only in camp: or attached to a brigade when an army is brigaded; he goes every day to head quarters to receive orders from the adjutant general: from thence he goes and gives the orders, at the place appointed for that purpose, to the different majors or adjutants of the regiments which compose his brigade, and regulates with them the number of officers and men which each are to furnish for the duty of the army; taking care to keep an exact roster, that one may not give more than another, and that each march in their tour; in short, the major of brigade is charged with the particular detail in his own brigade, in much the same way as the adjutant-general is charged with the general detail of the duty of the army. He sends every morning to the adjutant-general an exact return, by battalion and company, of the men of his brigade missing at the retreat, or a report, expressing that none are absent: he also mentions the officers absent with or without leave.

As all orders pass through the hands of the majors of brigade, they have infinite occasions of making known their talents and exactness.

MAJOR *of Artillery*, is also the next officer to the lieutenant-colonel. His post is very laborious, as the whole detail of the corps particularly rests with him; and for this reason all the non-commissioned officers are subordinate to him, as his title of serjeant-major imports; in this quality they must render him an exact account of every thing which comes to their knowlege, either regarding the duty or wants of the artillery and soldiers. He should possess a perfect knowlege of the power of artillery, together with all its evolutions. In the field he goes daily to receive orders from the brigade-major, and communicates them with the parole to his superiors, and then dictates them to the adjutant. He should be a very good mathematician, and be well acquainted with every thing belonging to the train of artillery, &c.

MAJOR *of engineers*, should be very well skilled in military architecture, fortification, gunnery, and mining. He should know how to fortify in the field, to attack and defend all sorts of posts, and to conduct the works in a siege, &c. See ENGINEER.

Aid-MAJOR, is on sundry occasions appointed to act as major, who has a pre-eminence above others of the same denomination. Our horse and foot guards have their guidons, or second and third majors.

Serjeant-MAJOR, is a non-commissioned officer, of great merit and capacity, subordinate to the adjutant, as he is to the major. See SERJEANT.

Drum-MAJOR, is not only the first drummer in the regiment, but has the same authority over his drummers as the corporal has over his squad. He instructs them in their different beats; is daily at orders with the serjeants, to know the number of drummers for duty. He marches at their head when they beat in a body. In the day of battle, or at exercise, he must be very attentive to the orders given him, that he may regulate his beats according to the movements ordered.

Fife-MAJOR, is he that plays the best on that instrument, and has the same authority over the fifers as the drum-major has over the drummers. He teaches them their duty, and appoints them for guards, &c.

MAJOR-*General*. See GENERAL.

MAJOR, *Fr.* The French considered this term, in a military sense, under the following heads:—

MAJOR-*Général d'une Armée*, Fr. Major-general generally so called, which see.

MAJOR-*Général de l'Infanterie Françoise*, Fr. Major-general of the French infantry. This appointment was made under Francis the 1st in 1515.

MAJOR-*Général des Dragons*, Fr. a major-general of dragoons. His functions were similar to those exercised by the *Maréchal-général des logis de la Cavalerie*; and nearly the same as those of the major-general of infantry.

MAJOR *de Brigade*, Fr. Brigade-major.

MAJOR *d'un Régiment de Cavalerie*, Fr. Major in a regiment of cavalry.

MAJOR *d'un Régiment d'Infanterie*, Fr.

Major of a regiment of infantry. Under the old government of France all majors of infantry regiments, were styled sergent-majors, or serjeant-majors in their commissions; They were not permitted to have any company of their own: because it was reasonably judged, that their own interest might render them more partial to that company, and the service be thereby injured.

MAJOR *d'une Place de Guerre*, Fr. Town-major.

MAJOR, *des quatres compagnies des Gardes du corps*, Fr. A rank which was exclusively given to an officer belonging to the old French guards. This was an appointment of considerable trust under the old government of France. He was lieutenant in each of the companies; and had the right of seniority over all lieutenants younger than himself in date of commission.

MAJOR *sur un vaisseau de guerre*, Fr. An officer on board a ship of war, whose duty it was to see the guard regularly mounted, and the sentries posted.

Etat-MAJOR, *Fr.* A comprehensive French term, in which is included every thing that can be conveyed under the word staff, as applicable to the British service. In a very recent publication, intituled, *Manuel des Adjudans-Généraux et leurs Adjoints*, the particular duties of the etat-major are accurately explained, of which an entire translation is incorporated with the *American Military Library*. Another work on the same subject, was published in 1809, by general *Grimoard*, entitled *Traité sur le Service des Armées contenant sur organasion, et ses fonctions sous les rapports administratifs et Militares*, with plates. The author began this work in 1778, and part of it was published in 1797, in the *Encyclopédie Metbodique*. This work has superceded the work of Thiebault, only on account of its being more comprehensive; their views and principles are the same.

MAJOR-*Dome*, Fr. An officer belonging to the gallies, who has the chief superintendance of provisions.

MAJORITY, the office, charge, or appointment of a regimental major.

MAIRE, *Fr.* Under the old government of France the person so called was invested with the first dignity of the kingdom. Charles Martel, of whom so much is said in the history of the French kings, was *Maire* of the palace. He was, in fact, grand master of the king's household, and had an entire control over the officers belonging to that establishment.

The appellation of *Maire du Palais*, or mayor of the palace, was given in lieu of *Maitre du Palais*, or master of the palace. This name was borrowed from the Roman emperors, who had each a grand master of the palace. Du Tillet, a French author, in page 12 of his book, pretends that the word is derived from *Mer*, which signifies *Præfect*. At first he had only the care and superintendance of the king's household, so that his functions were nearly similar to those that were exercised by the grand master of the king's household previous to the Revolution. During the reign of Clotaire the Second, the power of the *Maires* increased very considerably. Their influence grew greater through the weakness and effeminacy of the last kings of the second race; so much so, that they maintained an uncontroled power over the royal expenditure, and had the sole management of the king's affairs. Pepin added the dignity and functions of Maire to the royal prerogative; but he did not suppress them wholly. He merely limited his functions to what they were originally; which however were soon restored, in consequence of the fall and extinction of the second race. As the Maires possessed an unlimited control over the finances and judicature of the country, and had moreover the entire management of the war department, they found little difficulty in assuming a superiority over all the officers belonging to the crown. They took precedence of all dukes and counts who were the governors of provinces. On which account they were called *Ducs des Ducs*, or dukes of France. Hugh Capet was duke of France at the time he proclaimed himself king of the country; but the kings belonging to the third race, being convinced that the authority which was thus vested in one person, must eventually prove extremely dangerous, abolished the office of *Maire du Palais*, or duke of France. They divided the functions, and created the four great officers that were immediately attached to the crown. The command and superintendance of the army, were entrusted to the constable; the administration of civil justice was vested in the chancellor: the management of the finances was given to the grand treasurer, and the care of the king's household devolved upon the seneschal, who was afterwards styled grand master.

MAISON-*du-Roi*, Fr. The king's household. Certain select bodies of troops were so called during the monarchy of France, and consisted of the *gardes du corps* or body-guards, the *Gendarmes*, *Chevaux legers* or light horse, *Mousquetaires* or musqueteers, *la gendarmerie*, *grenadiers à cheval* or horse-grenadiers, the regiments belonging to the French and Swiss guards, and the *cent Suisses* or hundred Swiss guards. The *Maison-du-Roi* or king's household, was not considered as a separate establishment from the rest of the army, until the reign of Louis IV. This establishment was successively formed by different kings out of militia companies, which they took into their body guard.

MAISON *Meurtriere*, Fr. This term was formerly given to casemates.

MAITRE *des armes*, Fr. Master at arms. An officer, during the existence of the Grecian empire, who took precedence of the *Maitre de la milice*, or commander of the militia.

MAITRE *d'armes*, Fr. A term in general use among the French, signifying a fencing master. Every regiment has a *maitre d'armes* attached to it.

MAKE-*Ready*, a word of command in the firing, on which the soldier brings his piece to the *recover*, at the same time cocking it ready for firing.

MAL *d'armée*, Fr. A sort of contagious disorder which sometimes rages in an army, and is occasioned by too much fatigue, or by bad food.

MAL-*de-Mer*, Fr. Sea-sickness.

MAL-*de-Terre*, Fr. The scurvy is so called by the French.

MALABAR GUNS, *Ind.* Heavy pieces of ordnance, which are made in the Malabar country, and are formed by means of iron bars joined together with hoops. They are very long, and extremely unwieldy.

MALADES, *Fr.* The sick:

Soldats-MALADES, *Fr.* Soldiers on the sick list.

MALANDRINS, *Fr.* a set of freebooters, who under the reign of Charles V. infested France. During the 14th century, these plunderers made their appearance twice in considerable bodies. They consisted chiefly of discharged soldiers who formed themselves into marauding parties, and pillaged with impunity all the travellers they met. *Abbé de Choisi*, relates that it was extremely hazardous to oppose them in their first onset. These pillagers, whom the inhabitants called *Malandrins*, assembled in different cantons, chose their own leaders, and observed a sort of discipline in their depredations.

They usually contrived to station themselves in such a manner, that it was impossible to attack them.

They plundered or destroyed many places and buildings through which they passed, and paid no regard to church or state. Their principal and most notorious leaders, were the Chevalier de Vert, brother to the count d'Auxerre, Hugues de Caurelée, Mathieu de Gournar, Hugues de Varennes, Gauthier Huet, and Robert Lescot, who all belonged to some order of knighthood. Bertrand du Guesclin cleared the country of these dangerous and unprincipled men, by leading them into Spain under a pretence of fighting the Moors, when in reality his object was to attack Peter the cruel. See French Hist. de Charles V. liv. 1. page 86.

MALINGERER, (from the French) one who feigns illness to avoid his duty.

MALINGRE, *Fr.* peaking, sickly.

MALL. See MAUL.

MALLET, a wooden hammer, to drive the pegs into the ground, by which a tent is fastened; it is likewise used on various other occasions, especially in fortification and artillery.

MALLEABLE, in the art of founding, a property of metals, whereby they are capable of being extended under the hammer.

MALTA. The strongest place in the Mediterranean, taken by the French troops during the present war, from the knights of that order, and since re-taken by the British. The island of Malta may be considered as a key to the Levant. See MILITARY orders.

MAMMILLIARIA, (*Mammellieres*, Fr.) a word corrupted from the Latin, signifying a sort of armor, or that part of armor which formerly covered the chest and nipples. *Etienne de la fontaine*, who was silver smith to the French court, mentions among other articles two sets of *Mammillieries*, in an account which was delivered in the year 1352.

MAMALUKES, (*Mammelucs*, Fr.) Some writers assert that they were Turkish and Circassian slaves, originally purchased from the wandering tartars by Meliesaheh, and amounting in number to one thousand men. They were trained and disciplined to war, and some were raised to the first places of trust in the empire. Other writers say that the mamelukes were generally chosen out of christian slaves, and may be considered in the same light as the Turkish janizaries are; others again assert, that they originally came from Circassia, and attracted public notice by their valor, &c. in 869. See *D'Herbelot*, page 545. The mamelukes have made a considerable figure during the present war, especially in their contest against Bonaparte, for the defence of Egypt. They afterwards joined the French, and formed a considerable part of their cavalry.

MAN, to *man the works*, is to post the soldiers on the lines so as to be ready for their defence, &c. In the plural number it means soldiers, as an army consisting of 12,000 men.

Flank-front-rank-MAN. Each soldier upon the right and left extremity of the first line or rank of any given body of troops is so called.

Flank-rear-rank-MAN. Each soldier upon the right and left extremity of the last line or rank of any given body of troops.

When a company or battalion is drawn up three deep, the two men who stand at the extremities of the centre line may be called *flank-centre-rank-men*.

MANCELLE, *Fr.* a small chain which is fixed to the collars of carriage or dray horses, and which terminates in a large iron ring, that is attached to the shaft. It likewise means the ring itself.

MANCHE *d'un Bataillon*, Fr. literally means the sleeve of a battalion.— This word originally signified any small body consisting of 40 or 60 men, which were drawn out of the main-body of a battalion, and were posted by files upon the corners or angles of the same battalion.

At present the word *manches* means the wings of a battalion, the centre of which was composed of pikemen, whilst pikes were in use. Thus there were right and left wings, which were again divided into half-wings, quarter-wings, and half-quarter-wings.

Any battalion may defile or break off by wings, half-wings, or by the other proportions.

The term *manche*, or wing, was undoubtedly adopted for the express purpose of distinguishing several small corps, which, though at times connected and standing together, could suddenly detach themselves, and act against the enemy without occasioning the most trifling fluctuation or movement in the main body. The Greeks and Romans must have had a term synonimous to *manche*, in order to shew the several little portions into which the phalanx of the former, and the legion of the latter, were at times divided, when there was occasion for either to manœuvre upon the same principles that we do by wings.

Gardes de la Manche, Fr. Men belonging to the old French body guards, who on particular occasions, as at the Royal Chapel, &c. stood on each side of the king, dressed in hoquetons, and armed with pertuisanes or lances.

La MANCHE, *Fr.* The channel.

La MANCHE *Britannique*, Fr. The British channel.

La MANCHE *de Bristol*, Fr. The Bristol channel

MANCHE *d'outil*, Fr. The handle of any utensil.

MANDARIN. A name which the Portuguese originally gave to the Chinese nobility. According to a French author, the Mandarins are divided into nine orders, each having a peculiar mark of distinction to ascertain its rank.

Civil MANDARINS. (*Mandarins lettrés*, Fr.) These were able and scientific men who had the management of the different branches belonging to civil government.

Military MANDARINS. (*Mandarins militaires*, Fr.) A certain proportion of the body of mandarins is selected by the emperor of China, to superintend and command the militia of the country, these are called military mandarins.

The mandarins are considered as noblemen, but their rank is not hereditary. Every mandarin undergoes a severe and close examination respecting his natural and acquired talents, before he receives a civil or military appointment; and there are public schools or seminaries to which the natives of the empire may repair to obtain the requisite qualifications for such important and honorable stations.

MANDILION, (*Mandille*, Fr.) the soldier's coat is so called by the Italians. It does not, however, bear that meaning either amongst us or among the French; *Mandilion* and *Mandille* signifying a footman's great coat.

MANEGE, in horsemanship, the exercise of riding the great horse, or the ground set apart for that purpose; which is sometimes covered, for continuing the exercise in bad weather; and sometimes open, in order to give more liberty and freedom both to the horseman and horse.

MANGAN, *Fr.* This word is sometimes written MANGON, (See GUN). A warlike machine which was formerly used. The term itself, indeed, was generally adopted to signify any species of warlike machine. But it more particularly meant the largest and most powerful machine that could be used for warlike purposes; whether it was practised to throw enormous stones against besieged places, or to cast javelins, &c. It was likewise called *balista*, from the Greek; *tormentum* from the Latin *à torquendo*; and sometimes *petraria*, because stones weighing upwards of three hundred and sixty pounds, were thrown from it. This machine answered the double purpose of defending or attacking fortified places, and it was sometimes used at sea. According to a French writer, one of these machines may still be seen at Basle.

MANGANELLE, *Fr.* See MANGONNEAU.

MANGONNEAU, *Fr.* A word originally derived from the Greek, which, according to Potter, seems to signify any engine designed to cast missive weapons. With respect to that particular engine, which the French have called *mangan*, *manganelle*, and *mangonneau*, there is not any specific term for that famous engine, out of which, stones of a size not less than mill-stones, were thrown with such violence, as to dash whole houses in pieces at a blow:—It was called indeed by the Romans, *balista*; but this name though of Grecian original, appears not to have been used in Greece; this engine, however, was known there, and was the same with that used by the Romans, the force of which is thus expressed by Lucan:—

At saxum quoties ingenti verberis ictu
Excutitur, qualis rupes, quam vertice montis
Abscidit impulsu ventorum adjuta vetustas;
Frangit cuncta ruens, nec tantum corpora pressa
Exanimat, totos cum sanguine dissipat artus.

MANIEMENT *des armes*, Fr. manual exercise Although it might be thought superfluous to enter into a minute explanation of the manual as practised by the French, it will not be deemed entirely useless to the military man, to make him master of the different terms. With this view, we shall likewise give the words of command used in the platoon exercise &c. The French manual differed from the English in many points; essentially so in the commencement of it, as, (extreme bad weather excepted) the soldiers in the former service, regularly appeared upon parade with fixed bayonets; so that the first word of command was,

Presentez vos armes.—Present arms.
Portez vos armes.—Shoulder arms.
Reposez sur vos armes.—Order arms.
Posez vos armes à terre.—Ground arms.
Relevez vos armes.—Take up arms.
Portez vos armes.—Shoulder arms.
L'arme au bras.—Support arms.
Portez vos armes.—Carry arms.
Presentez la baïonnette.—Charge bayonet.
Portez vos armes.—Shoulder arms.

The other words of command which do not belong to the manual, but are occasionally practised, consist of

Baïonnette au canon.—Fix bayonet.
Tirez la baguette.—Draw ramrod.
Baguette dans le canon.—Spring ramrod.
L'arme à volonté.—Slope arms.
L'arme au bras gauche.—Secure arms.
Armes au faisceau.—Pile arms.
Repos.—Rest.
Portez les armes comme sergent.—Advance arms.
Remettez la baguette.—Return ramrod.
Remettez la baïonnette.—Return or unfix bayonet.
Ouvrez le bassinet.—Open pan.
Fermez le bassinet.—Shut pan.

Port arms is not practised among the French. When a guard is dismissed, instead of *porting arms*, the soldier receives the following word of command, *haut les armes!* which is somewhat similar to *recover arms*.

MANIEMENT *des armes*, Fr. The platoon exercise is so called in the French service, and is distinguished from their manual by the additional caution of *charge en douze tems*, or prime and load in twelve motions.

Chargez vos armes.—Prime and load.
Ouvrez le bassinet.—Open pan.
Prenez le cartouche.—Handle cartridge.
Déchirez la cartouche.—Bite cartridge.
Amorcez.—Prime.
Fermez le bassinet.—Shut pan.
L'arme à gauche.—Cast over.
Cartouche dans le canon.—Load.
Tirez la baguette.—Draw ramrod.
Bourez.—Ram down cartridge.
Remettez la baguette.—Return ramrod.
Portez vos armes.—Shoulder arms.

FIRING AFTER THE MANUAL.

Apprêtez vos armes.—Make ready.
Joue.—Aim.
Feu.—Fire.
Chargez.—Prime and load.
Le chien au repos.—Half-cock firelock.
Portez vos armes.—Carry arms.
Presentez vos armes.—Present arms.
Portez vos armes.—Shoulder arms.
Reposez sur vos armes.—Order arms.
Repos.—Rest.

INSPECTION D'ARMES.—INSPECTION OF ARMS.

Baïonnette au canon.—Fix bayonet.
Baguette dans le canon.—Spring ramrod.

In the British service the ramrod is rammed down the barrel without any further word of command.

Vos armes à terre.—Ground arms.
Relevez vos armes.—Take up arms.
Portez vos armes.—Shoulder arms.
L'arme au bras.—Support arms.
L'arme à volonté.—Slope arms.
L'arme au bras.—Support arms.
Portez vos armes.—Carry arms.
L'arme sous le bras gauche.—Secure arms.
Rortez vos armes.—Shoulder arms.
Croisez la baïonnette.—Charge bayonet.

Croiser la baïonnette likewise signifies to cross bayonet in such a manner as to form a sort of cheval de frise to resist the attack of cavalry from either flank. This has been adopted since the French revolution, and consists in placing the shoulder of the bayonet of the second man behind the shoulder of the first man's bayonet; and so of every succeeding two from right to left.

Portez vos armes.—Carry arms.
Charge précipitée.—Prime and load quick; in four motions.
Chargez vos armes.—Load.
Deux.—Two.
Trois.—Three.
Quatre.—Four.
Charge à volonté.—Independent or running fire.
Chargez vos armes.—Prime and load.

PLATOON FIRING.

Peloton.—Platoon.
Armes.—Ready.
Joue.—Aim.
Feu.—Fire.
Charges.—Prime and load.
Roulement.—Roll.
Fin de roulement.—Cease to roll.
Feu à volonté.—Independent firing.
Peloton.—Platoon.
Armes.—Ready.
Commencez le feu.—Commence firing.
Roulement.—Roll.

It is here necessary to explain to the English reader, that the words of command *Roulement* and *Fin de Roulement* are only used in the drill, or when there is not any drum to beat the prescribed roll.

MANIER, *Fr.* to handle. This word is generally used among the French, in a military sense, whenever they speak of portable fire-arms, &c. Hence *maniement des armes*.

MANIER *les armes*, Fr. To handle the fire-lock, or handle arms.

MANIER *la hallebarde*, Fr. To handle, or salute with the halbert.

MANIER *le sponton*, Fr. To handle, or salute with the spontoon.

MANIER *l'épée*, Fr. To be a swordsman

MANIER *le drapeau*, Fr. To furl or unfurl the colors.

MANIER *l'épée à deux mains*, Fr. To be able to use your sword with either hand.

MANIFESTO (*manifeste*, Fr.) A public declaration which is made by a prince or state, containing motives and reasons for entering into a war. The formality of a *manifesto* has been considerably reduced in modern times. Among the ancients, on the contrary, it was particularly attended to. Potter, in his Grecian Antiquities, observes, that invasions without notice were looked upon rather as robberies than lawful wars, as designed rather to despoil and make a prey of persons innocent and unprovided, than to repair any losses, or damages sustained, which for ought the invaders knew, might have been satisfied for in an easier way. It is therefore no wonder, as Polybius (lib. iv.) relates of the Ætolians, that they were held as common outlaws and robbers in Greece, it being their manner to strike without warning, and to make war without any previous and public declaration, whenever they had an opportunity of enriching themselves, with the spoil and booty of their neighbors. Yet there want not instances of wars begun without previous notice, even by nations of better repute for justice and humanity: but this was only done upon provocations so great and exasperating, that no recompence was thought sufficient to atone for them: whence it came to pass, that such wars were of all others the most bloody and pernicious, and fought with excess of rage and fury; the contesting parties being resolved to extirpate each other, if possible, out of the world.

Before the Grecians engaged themselves in war, it was usual to publish a declaration of the injuries they had received, and to demand satisfaction by ambassadors; for however prepared, or excellently skilled, they were in the affairs of war, yet peace, if to be procured upon honorable terms, was thought more eligible: which custom was observed, even in the most early ages, as appears from the story of Tydeus, whom Polynices sent to compose matters with his brother Eteocles king of Thebes, before he proceeded to invest that city, as we are informed by Statius, (Thebaid. lib. ii. v. 368.) and several others. See Potter, page 64 and 65.

The Romans, on the other hand, used abundance of superstition in entering upon any hostility, or closing in any league or confederacy; the public ministers who performed the ceremonial part of both these were the Feciales, or heralds. The ceremonies were of this nature. When any neighboring state had given sufficient reason for the senate to suspect a design of breaking with them; or had offered any violence or injustice to the citizens of Rome, which was enough to give them the repute of enemies; one of the Feciales, chosen out of the college upon this occasion, and habited in the vest belonging to his order, together with his other ensigns, and habiliments, set forward for the enemy's country. As soon as he reached the confines, he pronounced a formal declaration of the cause of his arrival, calling all the Gods to witness, and imprecating the divine vengeance on himself, and his country if his reasons were not just. When he came to the chief city of the enemy, he again repeated the same declaration, with some addition, and withal desired satisfaction. If they delivered into his power the authors of the injury, or gave hostages for security, he returned satisfied to Rome: if otherwise they desired time to consider; he went away for ten days, and then came again to hear their resolution, and this he did, in some cases, three times: but, if nothing was done towards an accommodation in about thirty days, he declared that the Romans would endeavor to assert their right by their arms. After this the herald was obliged to return, and to make a true report of his embassy before the senate, assuring them of the legality of the war, which they were now consulting to undertake; and was then again dispatched to perform the last part of the ceremony, which was to throw a spear into (or towards the enemy's country) in token of defiance, and, as a summons to war, pronouncing at the same time a set form of words to the like purpose. Kennett's Roman Antiquities, book iv. page 229.

The British have within the last century totally changed the usages of war; and appear to court the opprobrium bestowed by history upon the Carthaginians for their perfidiousness and cruelty; and upon the Ætolians for their treachery and rapacity; by making war first, and issuing their manifesto afterwards; as in the attack on Copenhagen in 1806.

MANIGLIONS, the two handles on the back of a piece of ordnance. See CANNON.

MANIPLE. See MANIPULUS.

MANIPULARIS (*manipulaire,*) Fr. from MANIPLE, a handful or bottle of straw. The chief officer in a part of the Roman infantry called manipulus, was so called. This officer was likewise ordinary, *ordinaire*, Fr.

MANIPULA, *Fr.* See MANIPULUS.

MANIPULE *Pyrotechnique*, Fr. a certain quantity of iron or brass petards, which may be thrown by the hand upon an enemy. These petards and the method of making them, are particularly described by Casini in his work on artillery. See PETARDS.

MANIPULUS (*manipule*, Fr.) A small body of infantry originally so called among the Romans, during the reign of Romulus. Their ensign was a hand on the end of a staff.

It consisted of one hundred men, and in the days of the consuls and first Cæsars, of two hundred. Three manipuli constituted a Roman cohort. Each manipulus was commanded by two officers called centurions, one of whom acted as lieutenant to the other. A centurion among the Romans, may be considered in the same light, as we view a captain of a company in modern service. Every manipulus made two centuries or *Ordines*. This, however, cannot be said to have been the uniform establishment or formation of the manipulus; for according to Varro and Vegetius, it was the smallest body of men employed in the Roman armies, and composed the tenth part of a century. Spartian in his life of Sexennius Niger, says, it consisted only of ten soldiers. We have already observed, that it takes its name from manipulus, which signifies a handful of straw; the latter having been fixed to a long pole to serve as a rallying signal, before the eagles were adopted. This circumstance has given rise to the modern expression, a handful of men, *une poignée de gens*. Vegetius, on the other hand says, it comes from *manus*, which signified a small body or handful of men collected together, and following the same standard; and Modestus as well as Varro, state it to have been so called, because, when they went into action, they took one another by the hand, or fought all together. A French writer conceives, that manipulus may be considered as one of those parts of a modern battalion, which are distributed in different rooms, &c. and which is called *une chambrée*, or a company that messes together.

MANIPULUS, so called from its standard or flag, which was made of cloth, and hung suspended on a staff with a hand. The manipulus was distinguished in this manner from the chief standard of each legion, which was an eagle of massive metal.

MANOEUVRE, (*Manoeuvre*, Fr.) Manœuvres of war consist chiefly in habituating the soldier to a variety of evolutions, to accustom him to different movements, and to render his mind familiar with the nature of every principle of offensive or defensive operation. The regular manœuvres of the British army have been reduced to nineteen, though these are not competent to every exigency of service the skilful officer will know how to manœuvre as the ground he is upon requires.

The word manœuvre is frequently used in the French artillery to express the method with which a piece of ordnance or mortar is raised and placed upon its carriage by several hands, assisted by the crab or any other machine. In a general acceptation of the term, *manœuvre* means that mechanical process by which any weight is lifted.

To MANŒUVRE, is to manage any body or armed force in such a manner as to derive sudden and unexpected advantages before the enemy, from a superior talent in military movements. It consists in distributing equal motion to every part of a body of troops, to enable the whole to form, or change their position, in the most expeditious and best method, to answer the purposes required of a battalion, brigade, or line of cavalry, infantry, or artillery.

The use of all manœuvres and of all discipline is the same, to habituate men to the word of command, to perform what is commanded, and in the shortest time, in the best manner. The idea therefore of reducing *manœuvres* to 18 or 19, or any given number, manifests a misconception of the military art, that is truly surprizing; for it must be perceived by a practical man, that the principles of all manœuvres are few and simple; although manœuvres are as susceptible of infinite variety and of real use, as arithmetical numbers. The ability of the officer is shewn in the choice of manœuvre, and its adaptation to the ground manœuvred upon, the end proposed to be obtained by the manœuvre, the position of the enemy, and the exactness and celerity with which it is performed. The great perfection of manœuvre is when troops at a single word of command perform movements of different kinds at the same instant, but all to accomplish the same object; that is to accomplish together the end proposed by the commander. Soldiers should be so exercised as to be competent to move in any manner or direction on the instant; a fixt number of manœuvres is calculated to defeat this end. The Austrians have attempted to follow the French, and practise their methods of manœuvre, which are not so much for parade as for practice. In the United States, the prejudice against, or the ignorance of manœuvre is excessive.

It has always been lamented, that men have been brought on service without being acquainted with the uses of the different manœuvres they have been practising; and having no ideas of any thing but the uniformity of the parade, instantly fall into disorder and confusion when they lose the step, or see a deviation from the straight lines they have been accustomed to at exercise. It is a pity to see so much attention confined to show, and so little given to instruct the troops in what may be of use to them on real service.

Manœuvre when executed in the presence of the enemy, must be protected by some light troops, riflemen or horse artillery.

Grand MANŒUVRE *de Guerre*, Fr. This expression is peculiarly French, and may be said to signify the dispositions of war upon a large scale. According to marshal Saxe these dispositions consist chiefly in drawing troops up in such a manner, that the cavalry and infantry may support each other; but he objects to that arrangement by which companies or platoons of infantry are intermixed with squadrons of horse; for, as he justly observes, if the latter should be beaten, the foot soldiers must unavoidably be thrown into confusion by the enemy's cavalry, and be cut to pieces. For further particulars on this important article, see Saxe's *Reveries*, where he treats of *La Grande Manœuvre de Guerre*, and the supplement to them by baron d'Espagnac, page 69.

Warlike **Manoeuvres**, (*Manoeuvres de Guerre*, Fr.) Warlike manoeuvres, or the different exercises, &c. by which men are taught the military profession: these exercises, from the earliest periods of history, have been infinitely diversified. Vegetius, an ancient writer, remarks, that the Romans, in order to enure their raw troops to the fatigues of war, had specific regulations drawn up, by which every recruit was regularly practised in martial exercises. These regulations were originally formed during the existence of their republic, and were afterwards confirmed by the emperors Augustus and Adrian.

It was particularly ordained, that the cavalry as well as the infantry should be *walked out (être mener à la promenade)* three times every month. The foot were obliged to go ten miles beyond the lines of their encampment. On these occasions they were originally drawn up. But their movements both in going and returning were frequently altered; being sometimes obliged to march at a moderate rate, and at others to increase their pace and run. The same regulation held good with respect to the cavalry, which was armed and divided into certain proportions, called turmæ. The troops on horseback went the same distance, and practised different evolutions on the road. Sometimes advancing to attack, and at others suddenly wheeling round, to return to the charge with greater impetuosity. These exercises were not, however, confined to open roads, or a level country: both horse and foot were frequently ordered to make their way through intricate passes, over cragged hills, &c and to accustom themselves to every possible obstacle that might occur in military movements.

This species of *manoeuvre* or practising exercise, has at last obtained in modern times. It was till lately thought sufficient to teach a raw recruit the use of the firelock, and to make him master of a certain number of movements, by the knowlege of which he was held fit to make a part of a well disciplined corps. How to march against and attack an enemy, or to meet his attack with skill and steadiness; these principally constituted the system of modern manoeuvres, and are better understood by the name of evolutions. In the British service there is a specific number of manoeuvres or evolutions to which every regiment must conform, and with the particular practice of which every officer and soldier must be made intimately acquainted. See *Am. Mil. Library*.

MANOEUVRER, Fr. To manoeuvre. This verb in the French language may be applied two ways; as, *manoeuvrer les voiles*, to manage the sails and tackle of a vessel.

Manoeuvrer *des Troupes*, to make solders go through their different manoeuvres. *Ces troupes ont bien manoeuvré*, those soldiers have ably manoeuvred.

Bien ou mal **manoeuvrer**, *Fr.* signifies to manoeuvre well or ill; as, *un tel général ou officier a bien manoeuvré à tel passage, à tel endroit*, such a general manoeuvred well at such a passage or quarter: *mais un tel à mal manoeuvré à la defense ou à l'attaque de tel poste*, but such an officer manoeuvred extremely ill in his defence or attack of such a post. The word manoeuvre is originally derived from the Latin *Manûs Opus*.

MANOEUVRIER, *Fr.* any officer who is perfectly acquainted with the art of manoeuvring.

Manoeuvrier, *Fr.* A sea phrase, which is frequently used among the French, to signify that an officer not only understands all the different words of command, but can thoroughly manoeuvre his ship. It is common to say, *il est un des meilleurs manoeuvriers qui soient sur mer*, he is one of the ablest sea officers in the service.

MANTEAU, *Fr.* This word, which literally signifies a cloak, is frequently used among the French to express the covering that hussars or light infantry troops carry for the double purpose of shielding their bodies from the inclemencies of the weather in outposts, &c. and for spreading over their heads, by means of poles, when they occasionally halt, and take a position.

MANTELETS, in a military sense, are either single or double, composed of great planks of wood, of about 5 feet high, and 3 inches thick. The single ones are sometimes covered with tin, made musquet-proof, which the pioneers generally roll before them, being fixed upon wheels, to cover them from the enemy's fire, in opening the trenches, or carrying on the sap, &c. The double ones form an angle, and stand square, making two fronts, which cover both the front and flank of the sappers, &c. when at work: these have double planks with earth rammed in between them: they are 5 feet high and 3 in breadth, sometimes covered with plates of iron; they may with propriety be called a moving parapet, having a shaft to guide them by.

MANTONET, *Fr.* A small piece of wood or iron, which is notched, for the purpose of hanging any thing upon it. The pegs in soldier's rooms are sometimes so called.

MANUAL.—In a general acceptation of the word, means any thing done by the hand.

MANUAL *Exercise*, in the British service, is the exercise of the musquet, independent of powder and ball, and consists in seven motions of the firelock; 5 of which are essentially different from each other, viz. *order arms*, *fix bayonets*, *shoulder arms*, *present arms*, *shoulder arms*, *charge bayonets*, and *shoulder arms*.

I. *Order Arms.* (3 *motions.*) Bring the firelock to the trail in two motions as usual, seizing it at the first at the lower loop, just at the swell, at the 2d, bring it down to the right side, the butt within an inch of the ground: at the 3d, drop the butt on the ground, placing the muzzle against the hollow of the right shoulder, and the hand flat upon the sling; the thumb behind the barrel.

II. *Fix Bayonets.*—At the word, *fix*, grip the firelock; as soon as the word of command is fully out, push the firelock a little forward, at the same time drawing out the bayonet with the left hand, and fixing it with the utmost celerity. The instant this is done, return as quick as possible, to the *order*, as above described, and stand perfectly steady.

III *Shoulder Arms.*—As soon as the word *shoulder* is given, grip the firelock with the right hand, as in fixing bayonets, and, at the last word, *arms*, the firelock must be thrown, with the right hand, in one motion, and with as little appearance of effort as possible, into its proper position on the left shoulder; the hand crosses the body in so doing, but must instantly be withdrawn.

IV. *Present Arms. (3 motions.)*—1st. Seize the firelock with the right hand, under the guard, turning the lock to the front, but without moving it from the shoulder.

2d. Bring it to the *poize*, seizing it with the left hand, the fingers easily round the stock, the wrist upon the guard, and the point of the left thumb of equal height with the eyes.

3d. Bring down the firelock with a quick motion, as low as the right hand will admit without constraint, drawing back the right foot at the same instant, so that the hollow of it may touch the left heel. The firelock in this position is to be totally supported in the left hand; the body to rest intirely on the left foot; both knees to be straight; the firelock in front of the left eye, and the butt in front of the left thigh.

V. *Shoulder Arms. (2 motions.)*—1st. By a turn of the right wrist, bring the firelock to its proper position on the shoulder, as described above, the left hand grasping the butt.

2d. Quit the right hand, bring it briskly down to its place by the side.

VI. *Charge Bayonets. (2 motions.)*—1st. At on motion throw the firelock from the shoulder across the body, to a low diagonal recover, a position known by the name of *porting arms*, or *preparing for the charge*, in which the lock is to be turned to the front, and at the height of the breast; the muzzle slanting upwards, so that the barrel may cross opposite the point of the left shoulder, with the butt proportionally depressed; the right hand grasps the small of the butt, and the left holds the piece at the swell, close to the lower pipe, the thumbs of both hands pointing towards the muzzle.

2d. Make a half-face to the right, and bring down the firelock to nearly a horizontal position, with the muzzle inclining a little upwards, and the right wrist resting against the hollow of the thigh, just below the hip.

N. B. The first motion of the *charge* is the position which the soldier will either, from the shoulder, or after firing, take, in order to advance on an enemy, whom it is intended to attack with fixed bayonets; and the word of command for that purpose is "*prepare to charge.*" The second position of the charge is that which the front rank takes when arrived at a few yards distance only from the body to be attacked The first motion of the *charge* is also that which sentries are to take when challenging any persons who approach their posts.

VII. *Shoulder Arms. (2 motions.)*—1st. Face to the front, and throw up the piece into its position on the shoulder, by a turn of the right wrist, instantly grasping the butt, as before described, with the left hand.

2d. Quit the firelock briskly with the right hand, bringing it to its proper place by the side.

The men are taught likewise to *support arms* at *three* motions, throwing the first and second nearly into one: at the first motion they seize the small of the butt, under the lock, with the right hand, bringing the butt in the front of the groin, and keeping the lock somewhat turned out: at the second, they bring the left arm under the cock: at the third, they quit the right hand. In *carrying arms* from the *support*, the motions are exactly reversed.

In marching any distance, or in standing at ease, when *supported*, the men are allowed to bring their right hand across the body, to the small of the butt, which latter must in that case, be thrown still more forward; the fingers of the left hand being uppermost, must be placed between the body and the right elbow; the right hands are to be instantly removed when the division *halts*, or is ordered to *dress by the right*.

Time.—The motions in the manual exercise to be performed slow, leaving three seconds between each motion, except that of *fixing bayonets*, in which a longer time must be given.

The manual is not to be executed by one word, or signal, but each separate word of command is to be given by the officer who commands the body performing it.

In regard to the motions of *securing*, *grounding*, and *trailing*, as well as those of *piling*, &c. it will be sufficient for the soldiers to be taught to perform them in the most convenient and quickest method. *Returning bayonets* is to be done from the *order*; in the same manner as *fixing* them.

Sentries.—Sentries posted with shouldered arms, are permitted afterwards to *support*, but not to slope them. On the approach of an officer, they immediately *carry* their arms, and put themselves into their proper position; which is not to be done at the instant he passes, but by the time he is within twenty yards of their post, so that they may be perfectly steady before he comes up.

Corporals.—Corporals marching with reliefs, or commanding detachments, or divisions, carry their arms *advanced*, as formerly: for which purpose a soldier, when promoted to that rank, must be taught the position of *advanced arms*.

Explanation of the several Motions of the Platoon Exercise, as taught at the drill in the British service.

I. *Make Ready.*—As usual, bringing the firelock to the *recover*, and instantly cocking.

II. *Aim.*—1st. Slip the left hand along the sling, as far as the swell of the firelock, and bring the piece down to the *present*, stepping back about six inches to the rear with the right foot.

III. *Fire.*—After firing drop the firelock briskly to the *priming* position.

2d. Half cock.

IV. *Handle Cartridge.*—1st. Draw the cartridge from the pouch.

2d. Bring it to the mouth, holding it between the fore finger and thumb, and bite off the top of it.

V. *Prime.*—1st. Shake some powder into the pan.

2d. Shut the pan with the three last fingers.

3d. Seize the small of the butt with the above three fingers.

VI. *Load.*—1st. Face to the left on both heels, so that the right toe may point directly to the front, and the body be a very little faced to the left, bringing at the same time the firelock round to the left side without sinking it. It should, in this momentary position, be almost perpendicular (having the muzzle only a small degree brought forward), and as soon as it is steady there, it must instantly be forced down within two inches of the ground, the butt nearly opposite the left heel, and the firelock itself somewhat sloped, and directly to the front; the right hand at the same instant catches the muzzle, in order to steady it.

2d. Shake the powder into the barrel, putting in after it the paper and ball.

3d. Seize the top of the ramrod, with the fore finger and thumb.

VII. *Draw ramrods.*—1st. Draw the ramrod half out, and seize it back-handed exactly in the middle.

2d. Draw it entirely out, and turning it with the whole hand and arm extended from you, put it one inch into the barrel.

VIII. *Ram down cartridge.*—1st. Push the ramrod down, holding it as before, exactly in the middle, till the hand touches the muzzle.

2d. Slip the fore finger and thumb to the upper end, without letting the ramrod fall farther into the barrel.

3d. Push the cartridge well down to the bottom.

4th. Strike it two very quick strokes with the ramrod.

IX. *Return ramrod.*—1st. Draw the ramrod half out, catching it back-handed.

2d. Draw it entirely out, turning it very briskly from you, with the arm extended, and put it into the loops, forcing it as quick as possible to the bottom; then face to the proper front, the finger and thumb of the right hand holding the ramrod, as in the position immediately previous to drawing it, and the butt raised two inches from the ground.

X. *Shoulder Arms.*—Strike the top of the muzzle smartly with the right hand, in order to fix the bayonet and ramrod more firmly, and at the same time throw it nimbly up, at one motion to the shoulder.

N. B. Though the butts are not to come to the ground in casting about, as accidents may happen from it, yet they are permitted, while loading, to be so rested; but it must be done without noise, and in a manner imperceptible in the front.

Explanation of priming and loading quick.

Prime and Load.—1st. Bring the firelock down in one brisk motion to the priming position, the thumb of the right hand placed against the pan-cover, or steel: the fingers clenched; and the elbow a little turned out, so that the wrist may be clear of the cock.

2d. Open the pan by throwing up the steel, with a strong motion of the right arm, turning the elbow in, and keeping the firelock steady in the left hand.

3d. Bring your hand round to the pouch, and draw out the cartridge.

The rest as above described, excepting that, in the quick loading, all the motions are to be done with as much dispatch as possible; the soldiers taking their time, from the flugel man in front, for *casting over and shouldering only*.

Priming position.—In firing three deep the priming position for the front rank is the height of the waistband of the breeches: for the centre rank, about the middle of the stomach; and for the rear rank, close to the breast: the firelock, in all these positions, is to be kept perfectly horizontal.

Explanation of the Positions of each Rank in the Firings.

Front Rank, kneeling.—Bring the firelock briskly up to the *recover*, catching it in the left hand; and, without stopping, sink down with a quick motion upon the right knee, keeping the left foot fast, the butt end of the firelock, at the same moment, falling upon the ground; then cock, and instantly seize the cock and steel together in the right hand, holding the piece firm in the left, about the middle of that part which is between the lock and the swell of the stock; the point of the left thumb to be close to the swell, and pointing upwards.

As the body is sinking, the right knee is to be thrown so far back that the left leg may be right up and down, the right foot a little turned out, the body straight, and the head as much up as if shouldered; the firelock must be upright, and the butt about four inches to the right of the inside of the left foot.

Aim.—Bring the firelock down firmly to the *aim*, by sliding the left hand, to the full extent of the arm, along the sling, without letting the motion tell: the right hand at the same time springing up the butt by the cock so high against the right shoulder, that the head may not be too much lowered in taking aim; the right cheek to be close to the butt; the left eye shut, and the middle finger of the right hand on the trigger, look along the barrel with the right eye from the breech-pin to the muzzle, and remain steady.

Fire.—Pull the trigger strong with the middle finger, and, as soon as fired, spring up nimbly upon the left leg, keeping the body erect, and the left foot fast, and bringing the right heel to the hollow of the left; at the same instant drop the firelock to the priming position, the height of the right hip; *half cock, handle cartridge*, and go on with the loading motions, as before described.

Centre rank.—Make ready.—Spring the firelock briskly to the *recover*: as soon as the left hand seizes the firelock above the lock, raise the right elbow a little, placing the thumb of that hand upon the cock, with the fingers open on the plate of the lock, and then, as quick as possible, cock the piece, by dropping the elbow, and forcing down the cock with the thumb, step at the same time with the right foot a moderate pace to the right, and keeping the left fast, seize the small of the butt with the right hand: the piece must be held in this position perpendicular, and opposite the left side of the face, the butt close to the breast, but not pressed, the body straight and full to the front, and the head erect.

Aim.—As in the foregoing explanation for the front rank.

Fire.—Pull the trigger strong with the middle finger, and, as soon as fired, bring the firelock to the priming position, about the height of the stomach: the rest, as in the explanation of *priming* and *loading*, with this difference only, that the left foot is to be drawn up to the right, at the same time that the firelock is brought down to the priming position, and that immediately after the firelock is thrown up to the shoulder, the men spring to the left again, and cover their file leaders.

Rear rank.—Make ready.—Recover and cock, as before directed for the centre rank, and, as the firelock is brought to recover, step briskly to the right a full pace, at the same time placing the left heel about six inches before the point of the right foot. The body to be kept straight, and as square to the front as possible.

Aim.—As in explanation for the centre rank.

Fire.—As in explanation for the centre rank; after firing and shouldering, the men step as the centre rank does

In firing with the front rank *standing*, that rank makes ready, &c. as specified in the article relative to the *platoon exercise*.

Officers.—In giving words of command, as well in as out of the ranks, officers are to stand perfectly steady, and in their proper position; their swords held firmly in the full of the right hand, with the upper part of the blade resting against the shoulder, the right wrist against the hip, and the elbow drawn back.

Firing by platoons.—Officers, &c.—The officers, instead of giving the words *platoon, make ready, aim, fire*, are to pronounce the words short, as for instance, *'toon, ready, aim, fire.*

In firing by platoons, or divisions, the officers commanding them are to step out one pace, on the close of the *preparative*, and face to the left towards their men: they there stand perfectly steady till the last part of the *general*, when they step back again into their proper intervals, all at the same time. After a division has fired, the right hand man of it steps out one pace, in front of the officer, but still keeping his own proper front, and gives the time for *casting about* and *shouldering*, after which he falls back again into his place in the front rank.

The flugle man of a battalion is also to keep his front, in giving the time of exercise.

In firing by grand divisions, the centre officer falls back, on the *preparative*, into the fourth rank, and is replaced by the covering serjeant.

MANUBALISTE, *Fr.* From the Latin manubalista. A cross bow.

MANUFACTURES *d'armes*, Fr. Places appropriated for the manufacturing of arms. During the old government of France, three places were appropriated for the manufacturing of arms; one at Maubeuge, one at Charleville and Nourzon, and the third at St. Etienne en Foret. These were called royal manufactories of arms for public service. A director general superintended the whole, to whom every person concerned in the undertaking was subject, and who was himself subordinate to those artillery inspectors and comptrollers, that were severally appointed by the grand master of the ordnance and the secretary at war.

The United States have manufactories of arms at Harpers ferry, on Potomac; at Springfield, Massachusetts; at Washington City; and at Rocky Mount, S. Carolina.

MAP, in a military and geographical sense, is a plane figure, representing the surface of the earth, or a part thereof, according to the laws of perspective; distinguishing the situation of cities, mountains, rivers, roads, &c.

In maps these three things are essentially necessary. 1. That all places have the same situation and distance from the great circles therein, as on the globe, to show their parallels, longitudes, zones, climates, and celestial appearances. 2. That their magnitudes be proportionable to the real magnitudes on the globes. 3. That all places have the same situation, bearing, and distance, as on the earth itself.

Maps are either universal, which exhibit the whole surface of the earth; or partial, which exhibit some particular part thereof: each kind is called geographical or land-maps, in contradistinction to hydrographical or sea-maps, representing the seas and sea-coasts, properly called charts.

As a map is a representation of some part of the surface of the earth delineated upon a plane, the earth, being round, no part of the spherical surface of it can be accurately exhibited upon a plane; and therefore some have proposed globular maps. For this purpose a plate of brass might be hammered, or at a less expence a piece of paste-board might be formed into a segment of a sphere, and covered on its convex side with a map projected in the same manner as the papers of the common globe are. A map made in this method would show every thing in the same manner, as it would be seen upon a globe of the same diameter with the sphere upon the segment of which it was delineated: and, indeed, maps of this sort would in effect be segments of such a globe; but they are not in common use.

The ancients described all parts of the known earth in one general map. In this view one of them compares the shape of the earth to the leather of a sling, whose length exceeds its breadth: the length of the then known parts of the earth from east to west was considerably greater than from north to south; for which reason, the former of these was called the longitude, and the other the latitude.

The modern general maps are such as give us a view of an entire hemisphere, or half of the globe; and are projected upon the plane of some great circle, which terminates the projected hemisphere, and divides it from the other half of the globe, at the equator, the meridian, or horizon of some place. From the circle the projection is denominated, and said to be equatorial, meridionial, or horizontal.

Particular maps are such as exhibit to us less than an hemisphere; of this sort are maps of the great quarters into which the earth is divided, as Europe, Asia, Africa, and America; or maps of particular nations, provinces, countries, or of lesser districts.

A particular map is a part of a general one, and may be made upon the same principles, as by projecting a large hemisphere, and taking so much of it as the *map* is designed to contain. When we are to delineate a *map* of the smaller part of the earth, if it be near the equator, the meridians and parallels may be represented by equi-distant straight lines; if at some distance from the equator, the parallels may be equi-distant straight lines, and the meridian straight lines, a little converging towards the nearest pole; or the meridians may be straight lines, converging towards the nearest pole, and the parallels circular.

When we are to make a *map* of a very small district, as of a county or town, whatever part of the earth it be in, the meridians and parallels may be equi-distant straight lines, drawn through every minute, &c. of longitude, in proportion as the largeness of the *map* will allow. See **Plotting** and **Surveying**.

The use of *maps* is obvious from their construction. The degrees of the meridians and parallels shew the longitude and latitude of places; their bearings from each other appear from inspection; and their distance from each other may be measured by the divisions on the meridian, equator, or scales. **Geography**.

MARAUDE, *Fr*. The act of marauding. This word specifically means the theft or depredation which a soldier commits against the peasantry of the country, and for which offence, he is punished with death in all foreign services.

MARAUDEUR, *Fr* A marauder. This term is now strictly English. Its signification, however, is generally the same in all services. Any soldier that steals out of camp, armed or unarmed, for the purpose of pillaging the country, is a marauder, and is liable, upon conviction, to be punished with death, or such other punishment as by a general court-martial shall be awarded.

Aller en **Maraude**, means to go out marauding.

MARAUDING, in a *military sense*, the act of plundering, which is generally committed by a party of soldiers, who, without any order, go into the neighboring houses or villages, when the army is either in camp or in garrison, to pilfer and destroy, &c. Marauders are a disgrace to the camp, to the military profession, and deserve no better quarters from their officers than they give to poor peasants, &c. Marauding is also applied to plundering at sea; thus the Barbary Corsairs, and the British navy are systematic marauders.

MARC, *Fr*. A weight equal to eight ounces. In France, it is usual for silversmiths and jewellers to take a marc at that standard, but when articles of greater bulk and grosser quality than those they deal in, are brought to the scale, the marc contains 16 ounces to the pound. All stores and ammunition were appreciated by this measure.

A **MARCH**, (*une Marche*, Fr.) is the moving of a body of men from one place to another. Care must be taken, in marching troops, that they are not liable to be flanked or intercepted; for of all operations none is more difficult, because they must not only be directed to the objects they have in view, but according to the movements the enemy may have made.

Of all the mechanical parts of war, none is more essential than that of marching. It may be justly called the key which leads to all important motions and manœuvres of an army; for they depend entirely on this point. A man can be attacked in four different ways; in the front, on both flanks, and in the rear: but he can defend himself, and annoy the enemy, only when placed with his face towards him. Hence it follows, that the general object of marching, is reduced to three points only; to march forwards, and on both sides, because it is impossible to do it for any time backwards, and by that means face the enemy wherever he presents himself. The different steps to be made use of are three: slow, quick, and accelerated. The first is used only at reviews, for parade, or in mounting guard. The second is proper in advancing, when at a considerable distance from the enemy, and when the ground is unequal, that the line may not be broken, and that a regular fire may be kept up without intermission. The third is chiefly necessary, when you want to anticipate the enemy in occupying some post, in passing a defile, and, above all, in attacking an intrenchment, to avoid being a long while exposed to the fire of the artillery and small arms, &c. Columns may be opened and formed into lines, and *vice versa*, lines into columns, by all these steps. In coming out of a defile, you may instantly form the line without presenting the flank to the enemy. The line may be formed, though ever so near to the enemy, with safety, because you face him, and can with ease and safety protect and cover the motion of the troops, while they are coming out of the defiles and forming. The same thing may be equally executed, when a column is to be formed, in order to advance or retreat; which is a point of infinite consequence, and should be established as an axiom.

The order of *march* of the troops must be so disposed, that each should arrive at their rendezvous, if possible, on the same day. The quarter-master-general, or his deputy, with an able engineer, should sufficiently reconnoitre the country, to obtain a perfect knowlege both of that and of the enemy, before he forms his routes.

Before a *march*, the army generally receives several days bread. The quarter-masters, camp-color men, and pioneers, parade according to orders, and march immediately after, commanded by the quarter-master-general, or his deputy. They are to clear the roads, level the ways, make preparations for the march of the army, &c. The *general*, for instance, beats at 2, the *assembly* at 3, and the army to march in 30 minutes after. Upon beating the *general*, the village, and general officer's guards, quarter and rear-guards, join their respective corps; and the army pack up their baggage. Upon beating the *assembly*, the tents are to be struck, and sent with the baggage to the place appointed, &c.

The companies draw up in their several streets, and the rolls are called. At the time appointed, the drummers are to beat a march, and fifers play at the head of the line; upon which the companies *march* out from their several streets, form battalions as they advanced to the head of the line and then halt.

The several battalions will be formed into columns by the adjutant-general, and the order of march, &c, be given to the general officers who lead the columns.

The cavalry generally march by regiments or squadrons. The heavy artillery always keep the great roads, in the centre of the columns, escorted by a strong party of infantry and cavalry.—The field-pieces move with the columns.

Each soldier generally marches with 60 rounds of powder and ball, and three good flints; one of which is to be fixed in the cock of his firelock. The routes must be so formed, that no column may cross another on the march. See *American Military Library*.

MARCH! (*Marche!* Fr.) as a word of command, whenever it is given singly, invariably denotes that *ordinary* or *triple* time is to be taken; when the *slow time* is meant, that word will precede the other. The word *march*, marks the beginning of movements from the *halt*; but it is not given when the body is in previous motion. It should be sharp, clear, and distinct.

The usual rate of marching for cavalry is 17 miles in 6 hours; but this may be extended to 21, or even 28 miles in that time.

Rates paid for English carriages on the march.

One shilling *per* mile for every carriage { with 5 horses, or
with 6 oxen, or
with 4 oxen & 2 horses;

nine pence *per* mile for any cart with 4 horses, and so in proportion for less carriages; or a further sum, not exceeding 4*d* *per* mile for every carriage with 5 horses, or with 6 oxen, or with 4 oxen and 2 horses; or 3*d per* mile for every cart with 4 horses; and so in proportion for less carriages, as the same shall be fixed and ordered by the justices of the peace. The waggons, &c. not to carry more than 30 cwt.

Regular ferries in England are only to be paid for on the march at half the ordinary rate.

Marching money.—Innkeepers in the British dominions, are obliged to furnish troops on the march with diet and small beer, for the day of their marching in, and two days afterwards; u-less one of the days be a market day. For which the publican by the king's warrant, 17th of March, 1800, is to receive 16*d*, and which is paid in the following manner:

Paid by government,	Cav. 9*d*.—	Inf. 11*d*.
—— by the soldier	—— 6*d*.	—— 4*d*.
Soldiers beer money	—— 1*d*.	—— 1*d*.
Total	16	16

In **Marching** every soldier must be well balanced on his limbs: his arms and hands, without stiffness, must be kept steady by his sides, and not suffered to vibrate. He must not be allowed to stoop forward, still less to lean back. His body must be kept square to the front, and thrown rather more forward in marching than when halted, that it may accompany the movement of the leg and thigh: the ham must be stretched, but without stiffening the knee: the toe a little pointed, and kept near the ground, so that the shoe-soles may not be visible to a person in front: the head to be kept well up, straight to the front, and the eyes not suffered to be cast down: the foot, without being drawn back, must be placed flat on the ground.

The object so generally recommended, of keeping the body erect, and the legs well stretched and pointed, would be effectually gained, were recruits, when they are first placed under the moulding hand of the drill serjeant, taught and gradually accustomed to step well out from the haunches. This method is invariably practised among the French, who are unquestionably not only the best dancers, but the most expert movers on foot in the world.

Quick-**March.** *Ordinary* time. A movement by which troops advance at the rate of 75 steps in the minute, each of 24 inches, making 150 feet or 50 yards in a minute.

Quick-**March.** As a word of command, signifies, that the troops should move in quick time.

Slow-**March.** A movement by which troops advance at the rate of 60 steps in the minute.

In order to teach a recruit the just length of pace, accurate distances must be marked out on the ground, along which, he should be practised.

Wheeling-**March,** *or* accelerated pace is 120 steps of 24 inches each, or 2880 inches, or 240 feet in the minute.

This is the most rapid movement by which men under arms, or otherwise when formed, should go from line into column, or come from column into line. This is applied chiefly to the purpose of wheeling, and is the rate at which all bodies should accomplish their *wheels*, the outward file stepping 30 inches, whether the wheel be from line into column, during the march in column, or from column into line. In this time also should divisions double and move up, when passing obstacles in line; or when in the column of march, the front of divisions is increased or diminished.

A **March,** (*La Marche*, Fr.) a certain tune or concord of notes, which is adapted to the movement of any particular body of troops, as, the grenadier's march, the march of the Marseillois, *la marche des Janizaires*, the march of the Janizaries.

Marching *to the front or rear.* This is one of the most difficult operations in military movements.

The person instructing a platoon will, before he puts it in motion to front or rear, indicate which flank is to direct by giving the word, *mark time!* and then *forward* or *march.* Should the right be the directing flank, the commander of the platoon himself, will fix on objects to march upon in a line truly perpendicular to the front of the platoon; and when the left flank is ordered to direct, he and his covering serjeant will shift to the left of the front rank, and take such objects to march upon.

The conductor of the platoon, before the word *march* is given, will endeavor to remark some distant object on the ground, in his own front, and perpendicular to the directing flank, he will then observe some nearer and intermediate point, in the same line, such as a stone, tuft of grass, &c. these he will move upon with accuracy, and as he approaches the nearest of these points, he must from time to time chuse fresh ones in the original direction, which he will by these means preserve, never having fewer than two such points to move upon. If no object in the true line can be ascertained, his own squareness of person must determine the direction of the march.

The same observations hold good in all movements to front or rear, or from either flank; and the only way to execute them with accuracy, is for the leader to look out for small intermediate points of march.

March *of a battalion in file*, is to advance from the right, left, or centre of any given number of men, for the purposes of countermarching, or of closing, or opening an interval in line. On these occasions the whole step off together at the word *march*, and dress at the word *mark time*, the whole front, and the officers and serjeants, resume their several posts in line and then receive the word *halt.* Whenever more than one company march in file, the officers are out of the ranks during the march, on the left of the leading file when the right is in front, and on the right when the left is in front. They are of use in preserving the line and step, as the rear officer necessarily keeps the pace, and marches on the exact perpendicular line of his coverer. When a company is marched off singly, or files into or out of column, the officer is invariably to be in front. It sometimes happens, that a battalion standing in narrow ground, may be obliged to form open column from its leading flank, either before or behind that flank, before or behind its other flank; or before or behind any central part of the line.

To March *in file before the right flank.* When the right platoon or company has moved on, the rest of the battalion face to the right, and march in file: the divisions then successively front, following each other, and taking the leading one for their regulating company.

To March *in file behind the right flank.* The whole face to the right, and *march* by word of command; at which instant the right division countermarches to the rear, *fronts*, and moves forward; whilst every other division successively moves on in the same manner (having previously countermarched) and continues till the whole is in column.

To March *before any central point or the left flank.* The battalion makes a successive *countermarch* from the right flank towards the left, and when the right division is arrived at the point from whence it is to advance in column, it again *countermarches* to its right, a space equal to its front, then faces, moves on, and is thus successively followed by part of the battalion. The other part of the battalion, beyond the point of advancing, *faces* inwards, when necessary makes a progressive march in file, and then *fronts*. Each division belonging to this part of the battalion follows successively till the whole stand in column.

To March *by files behind the centre or left flank.* The right proportion of the battalion *countermarches* from the right by files successively by the rear, and the other proportion of the battalion, according to circumstances, makes a progressive march by files from its right to the central point, and there begins to countermarch; at that point the leading or head division *fronts* into column, and moves on, each successive division doing the same. When the left of a battalion is to be in front, the same operations take place by an inverse march of the several divisions.

This method, however, of marching by files into open column, should be resorted to as little as possible, and never when it can be conveniently avoided. The formation of open column from battalion and line is better done by the wheelings of companies, subdivisions, or sections.

To March *up in charging order*, is to advance towards the enemy's line with a quick but firm and steady pace, till you get within a few paces of the opposing body, when an increased rapidity must be given to the whole, but not to run so as to lose breath, the officers on this occasion must be particularly attentive to the several divisions in their charge, keeping them well dressed to their centre, and thereby preventing dangerous openings and consequent confusion. The French call this the *pas de Charge*.—Which see under Pas. See *Am. Mil. Lib.*

Points of March, one or more objects which ought always to be prepared for the direction of any considerable body, every leader of which who moves directly forward in front, must take care to conduct it in a line perpendicular to that front. But should a leader, either in file or front, have only one marked point of march, ascertained to him, he will himself instantly look out for small intermediate points.

To March *in file to a flank*, is to reduce a line by marching out from its several divisions towards a given flank, there to remain in close or open column, of brigades, regiments, grand divisions, companies, &c. nothing is more essential in all deployments into line, and in the internal movements of the divisions of the battalion, than the accuracy of the march in file. After facing, and at the word *march*, the whole are directed to step off at the same instant, each man replacing, or rather overstepping the foot of his preceding comrade: that is the right foot of the second man comes within the left foot of the first, and thus of every one, more or less overlapping, according to the closeness, or openness of the files and the length of step. The front rank will march straight along the given line, each soldier of that rank must look along the necks of those before him, and never to right or left. The centre and rear ranks must look to, and regulate themselves by their leaders of the front rank, and always dress in their file. File marching is always made in quick time.

March *of a battalion in line*, is a regular continuity of files advancing forward in two or three ranks, each rear file preserving a perpendicular direction to its leader, and the ranks being kept parallel to each other at given distances; so that the whole line shall continue straight without being deformed by a concavity or convexity of figure. The *march* of the battalion in line, either to front or rear, being the most important and most difficult of all movements, every exertion of the commanding officer, and every attention of officers and men, become peculiarly necessary to attain this end. The great and indispensible requisites of this operation are, that the direction of the march be perpendicular to the front of the battalion as then standing; that the shoulders and body of each individual be perfectly square, that the files touch lightly at the elbow only, and finally, that an accurate equality of cadence and length of step be given by the advanced guides or serjeants, whom the battalion in every respect must cover, and which equality of cadence and length of step every individual must follow and comply with. If these essential rules are not observed, its direction will be lost, the different parts will open and attempt to close, and by so doing, a floating of the whole will ensue, and disorder will arise at a time when the remedy is so difficult, and perfect order so imperiously wanted.

In order to ensure these essential requisites, and to produce perfect correctness, the serjeants must be trained to this peculiar object, on whose exactness of cadence, regularity of step, squareness of body, and precision of movement, the greatest dependance can be placed, these are the proper *guides of manoeuvre*. The habitual post of the two principal directing serjeants, is to be in the centre of the battalion, betwixt the colors. One of them is posted in the front rank, and one in the rear, that they thereby may be ready to move out when the battalion is to march; another also covers them in the supernumerary rank.

Whenever the battalion is formed in line and halted, the front directing serjeant or guide, after having placed himself perfectly and squarely in the rank, must instantly cast his eyes down the centre of his body, from the junction of his two heels, and by repeated trials endeavor to take up and prolong a line perpendicular to himself, and to the battalion; for this purpose he is by no means to begin with looking out for a distant object, but if such by chance should present itself in the prolongation of the line, extending from his own person, he may remark it. He is therefore rather to observe and take up any accidental small point on the ground within 100 or 150 paces. Intermediate ones cannot be wanting, nor the renewal of such as he afterwards successively approaches to in his march. In this manner he is prepared, subject to the future correction of the commanding officer, to conduct the march.

To MARCH *forward or advance in line, when the battalion has been halted and correctly dressed*—Is to step off, according to any given word of command, in quick or ordinary time, and to march over a perpendicular line of direction, without deviating to the right or left, or unnecessarily opening or closing during the movement; the commanding officer having previously placed himself 10 or 12 paces behind the exact line of the directing serjeant, will, if such file could be depended on, as standing truly perpendicular to the battalion, (and great care must be taken to place it so) remark the line of its prolongation, and thereby ascertain the direction in which it should march; but, as such precision cannot be relied on, he will from his own eye and from having the square of the battalion before him, with promptitude make such correction, and observe such object to the right or left, as may appear to him the true one; and in doing this, he will not at once look out for a distant object, but will hit on it, by prolonging the line from the person of the directing serjeant to the front; or he will order the covering serjeant to run out 20 paces, and will place him in the line in which he thinks the battalion ought to advance. The directing serjeant then takes his direction along the line which passes from himself, betwixt the heels of the advanced serjeant, and preserves such line in advancing, by constantly keeping his object in view

When the commanding officer gives the *caution, (the battalion will advance)* the front directing serjeant moves out 6 accurate and exact paces in ordinary time, halts; the two other guides who were behind him, move up on each side of him, and an officer from the rear, replaces in the front rank, the leading serjeant. The centre serjeant, in moving out marches and halts on his own observed points, and the two other serjeants dress and square themselves exactly by him. If the commanding officer is satisfied, that the centre serjeant has moved out in the true direction, he will intimate as much; if he thinks he has swerved to right or left, he will direct him to incline to that side, the smallest degree possible, in order thereby to change his direction, and to take new points on the ground, towards the opposite hand.

The line of direction being thus ascertained, at the word *march*, the whole battalion instantly step off, and without turning the head, eyes are glanced towards the colors in the front rank; the replacing officer betwixt the colors, preserves, during the movement, his exact distance of 6 paces from the advanced serjeant, and is the guide of the battalion. The centre advanced serjeant is answerable for the direction, and the equal cadence and length of step; to these objects he alone attends, while the other two, scrupulously conforming to his position, maintain their parallelism to the front of the battalion, and thereby present an object, to which it ought to move square: they are not to suffer any other considerations to distract their attention. They must notice and conform to the direction of the commander only, and if any small alteration in their position be ordered, the alteration must be gradually and cooly made.

These are the essential points, wich the guiding serjeants must be rendered perfect in, and to which every commanding officer will pay the most minute attention. With respect to the officers in the ranks, they can only be observant of their own personal exactness of march, and must consider themselves, as forming part with the aggregate of the men, subject to the same principles of movement, and in no shape or sense independent of them. They may attend to dress their companies by looking along the front, or by calling to the individuals who compose it. By so doing they must not destroy the exact parallelism of the rank they stand in, nor derange the march: the care of correcting any errors in the front line, belongs to the officers in the rear.

Well-trained soldiers, indeed, know the

remedy that is required, and will gradually apply it.

The colors, as far as their natural weight and casualties of the weather will admit, must be carried uniformly and upright, thereby to facilitate the moving and dressing of the line. But it frequently happens in windy weather, and in movements over rough ground, that very little dependence can be placed on the officer who carries them, for a true direction, or an equal and cadence step. On these occasions, and indeed on all others, the men must on no account turn their heads to the colors. They must, on the contrary, keep their shoulders square to the front, and depend principally on the light touch of the elbow, together with an occasional glance of the eye, and the accuracy of step, for their dressing. On the light touch of the elbow, and a regular cadenced step, the chief dependence must be placed: for if the men be often permitted to glance at the centre, they will, by so doing, insensibly contract that habit, abandon the touch of the elbow, shorten or perhaps lose the cadence step, and in proportion, as the files which are removed from the centre, adopt that method, the line itself will gradually assume a concave form, by the flanks bending inwards.

When any waving, or fluctuation in the march, is produced by an inequality of step, the major and adjutant, who from their situation are particularly calculated to correct the irregularity, will immediately apprize the companies in fault, and cooly caution the others that are well in their true line, not to participate of the error.

When a company has lost the step, (a circumstance which frequently happens) the supernumerary officer of that company must watch a seasonable moment to suggest a change of step, in which operation, he will be assisted by the supernumerary serjeants. For it must be an invariable rule among officers in the ranks, never to deviate from their own perpendicular line of march, to correct the errors of their several companies. That business belongs entirely to the major and adjutant, who are occasionally assisted by the supernumeraries, in the manner just mentioned.

It very often happens, that a central division by bulging out, may make a flank of a battalion appear to have lost ground, when the fault in reality arises from that division, either stepping out too far, or from it being warped towards the colors, and thereby preventing the flank from being seen.

All changes and corrections that are judged necessary to be made, in any part of a battalion, during its march in line, must be effected gradually. Any abrupt alteration would unavoidably produce a waving, which must be felt in every part. The mounted officers only, with the imperceptible aid of the supernumeraries, can alone point out and correct such faults.

The flanks are not, on any account, to be kept back; much less are they to be advanced before the centre, since in either case, the distance of files must be lost, and the battalion will not be covering its true ground. The commanding officer of every battalion, will easily perceive this defect, by casting his eye along the line, which must soon acquire a concave or convex shape, unless the beginning of each inaccuracy be studiously attended to, by the necessary officers.—The two officers who are on the two flanks of the battalion, being unconfined by the rank, and not liable to be influenced by any floating that may arise, by preserving an accurate step, and having a general attention to the colors, and to the proper line which the battalion should be in, with respect to the advanced directors, will very much contribute towards preserving the flanks in their due position. When either of them observes that a line, drawn from himself, through the centre of the battalion, passes considerably before the other flank, he may conclude, that he is himself too much retired; when such line passes behind that flank, he may be certain that he is too much advanced; he will, therefore, regulate himself accordingly. When the battalion in march is convex, the wings must gain the straight line of the centre, by bringing up the outward shoulder; and it must be strongly impressed upon the soldier's mind, that in all situations of movement, by advancing or keeping back the shoulder as ordered, the most defective dressing will be gradually and smoothly remedied; whereas sudden jerks and quick alterations break the line, and eventually produce disorder.

It must be generally remarked, that the rear ranks which were closed up before the march began, are to move at the lock step, and not be allowed to open during the march. The correct movement of the battalion depends much on their close order.

In the march in line, arms are always to be carried *shouldered*. Supported arms are only allowed when the battalion is halted, or advanced in column; but if this indulgence were allowed in line, when the most perfect precision is required, the distance of files would not be preserved, and slovenliness, inaccuracy, and disorder, must inevitably take place.

To change direction on the centre in MARCH, is to correct any floating of the line, occasioned by the opening or closing of the flanks, by ordering a section or central platoon to quarter wheel to right or left. At this command the guiding serjeant making an almost imperceptible change of his position, and of his points, and the colors in the battalion, when they have advanced 6 paces to his ground, conforming to it, the whole will, by degrees, gain a new direction. Every change of direction made in this manner, must produce a kind of wheel of the battalion, on its centre, one wing gradually giving back, and the other as gradually advancing, an attention which the commander must be careful to see observed.

When the battalion which has marched in perfect order, arrives on its ground, it keeps the *marked time* until it is dressed, and receives the word *halt*, the step which is then taking is finished, and the whole halt. Eyes are cast to the centre, and the commanding officer places himself close to the rear rank, in order to see whether the battalion be sufficiently dressed, and in a direction perfectly parallel to the one it quitted.

When the battalion is advancing in line for any considerable distance, or moving up in parade, the music may be allowed at intervals, to play for a few seconds only, and the drums in two divisions to roll, but the wind instruments are alone permitted to play. When the line is retiring, the music are never to play.

To march by any one face, the square or oblong having previously been formed by the 4th, 5th, and 6th, companies of a regular battalion standing fast. Under these circumstances, the side which is to lead is announced; the colors move up behind its centre; the opposite side faces about: and the two flank-sides wheel up by sub-divisions, so as to stand each in open column. The square marches, two sides in line, and by their centre; and two sides in open column, which cover, and dress to their inward flanks on which they wheeled up carefully preserving their distances. The square halts, and when ordered to front square, the sub-divisions in column immediately wheel back, and form their sides, and the side which faced about again faces outwards.

To MARCH *by the right front angle.*—When the perfect square is to march by one of its angles, in the direction of its diagonal, a caution is given by which angle the movement is to be made, and the two sides that form it stand fast, while the other two sides face about. The whole then by sub-divisions, wheel up one-eighth of a circle, two sides to the right, and two sides to the left, and are thus parallel to each other, and perpendicular to the direction in which they are to move, the pivot-flanks being in this manner placed on the sides of the square. Each side being thus in echellon, and the colors behind the leading angle, the whole are out in march, carefully preserving the distances they wheeled at, and from the flanks to which they wheeled.

When the oblong marches by one of its angles, its sub-divisions perform the same operation of wheeling up, each the eighth of the circle; but its direction of march will not be in the diagonal of the oblong, but in that of a square, viz. of the line which equally bisects the right angle. It will be remembered, that the angular march of the square or oblong, may be made in any other direction, to the right or left of the above one; but in such case the sub-divisions of the two opposite sides, will have to wheel up more than the eighth of the circle, in order to stand as before, perpendicular to the new direction. The sum of these two wheels will always amount to that of a quarter circle, and their difference will vary as the new line departs, more or less, from the equal bisecting line; this will be known by the first wheeling up the two angular divisions, till they stand perpendicular with the new direction, and then ordering all the others to conform accordingly. This movement is very beautiful in the execution, but cannot be made with any degree of accuracy, unless the perpendicular situation of the division is correctly attained, and carefully preserved.

To MARCH *in open ground, so as to be prepared against the attack of cavalry.*—In order to execute this movement, with some degree of security, one or more battalions may move in column of companies at quarter distances, one named company in the centre of each being ordered to keep an additional distance of 2 files; in which shape a battalion is easily managed, or directed upon any point. When the column *halts*, and is ordered to *form the square*, the first company falls back to the second, the last company closes up to the one before it: the whole companies make an interval of 2 paces in their centre, by their sub-divisions taking each one pace to the flanks; 2 officers with their serjeants, place themselves in each of their front and rear intervals; two officers with their serjeants, also take post in rear of each flank of the company, from which the additional interval has been kept; and a serjeant takes the place of each flank front rank man of the first division, and of each flank rear rank man of the last division; all other officers, serjeants, the 4 displaced men, &c. assemble in the centre of the companies, which are to form the flank faces. Those last named companies having been told off, each in 4 sections, wheel up by sections, 2 to the right, and 2 to the left; (the 2 rear companies at the same time closing up, and facing outwards,) the inner sections then close forward to their front ones, which dress up with the extremities of the front and rear companies, and 4 on each flank of the second companies, from the front and from the rear; *Face outwards!*—The whole thus stand faced outwards and formed 6 deep, with two officers and their serjeants in the middle of each face, to command it; all the other officers, as well as serjeants, &c. are in the void space in the centre, and the files of the officers in the faces, may be completed from serjeants, &c. in the interior, in such manner as the commandant may direct. The mounted field officers, must pass into the centre of the column, by the rear face, if necessary, opening from its centre 2 paces and again closing in.

When ordered only, the 2 first ranks all round the column, will kneel and the front rank slope their bayonets, the 2 next ranks will fire standing, and all the others will remain in reserve; the file coverers behind each officer of the sides will give back, and enable him to stand in the third rank.

March *resumed under the same circumstances.* On receiving the cautionary word of command, the several sections that had closed up, fall to their distances; the sections then wheel back into column; the officers, serjeants, &c. take their places on the flanks; and when the column is again put in motion, the companies that closed up, successively take their proper distances.

It will be remembered that unless the companies are above 16 file, they cannot be divided into 4 sections; so that in this case, a section may consist of 4 file or eight men, if therefore, they are under 16 file, and told off in sections of 5 or 3, the column will march at the distance of a section; and in forming the square, the 2 outward sections will wheel up, but the 3d one will stand fast, and afterwards, by dividing itself to right and left, will form a 4th rank to the others; in resuming column the outward sections wheel back, and the rear of the centre sections easily recover their places: as to all other circumstances, they remain the same.

The **March**, when applied to the movement of an army, consists in its arrangement with respect to the number and composition of columns, the precautions to be taken, the posts to be seized upon to cover it, &c. which arrangement must depend upon circumstances. The following are general rules:

The routes must be constantly opened to the width of 60 feet.

If the march be through an open country, without defiles, the cavalry march by divisions of squadrons, and the infantry by platoons or half companies.

In an inclosed country, or such as is intersected by hollow ways, or other defiles, the march must be by sections of 6 (by the heads of the section after facing to left, being wheeled to the right) or more files in the infantry, and ranks by threes or by twos in the cavalry, and the artillery must move in a single file, because the frequent breaking off and forming up again, may retard the march, and fatigue the troops.

In marches made parallel to, or with a view of gaining the enemy's flank, divisions must preserve their wheeling distances, and the column must cover the same length of ground which it would occupy in line of battle; in marches directly perpendicular to the enemy's position, the column must be closed up to half or quarter distance, in order to move in as compact a body as possible.

The pivot files must attend to preserve their distances exactly, each following precisely the path pointed out by the one before him; and keeping the regular marching step, by which means, upon a signal being given, the division is in a moment in order. The leader or *guide* of the pivot file may be occasionally changed.

At the head of every column, whether composed of infantry or cavalry, a well instructed non-commissioned officer must march as *guide*. He must carefully keep the regular step of the march, to which the troops are drilled, and upon this man the regular pace of the column will depend; by this method two essential points are ensured; one, that every column moves in exactly the same time, and of course enables the officer commanding to calculate the march with certainty; another that it ensures the troops not being over hurried, which they are more especially liable to be when cavalry leads the column; two non-commissioned officers should be appointed for this purpose, who must relieve each other.

At the head of every column of march, there must be a considerable number of pioneers to clear the rout.

Guns or carriages breaking down and disabled, are immediately to be removed out of the line of march, so as not to interrupt its progress.

Officers are most positively enjoined at all times to remain with their divisions, whether marching or halted.

The commanding officers of regiments must pay the greatest attention to their corps whilst passing a defile, and proper officers should be left to assist in this most essential part of the conduct of marches.

It is a standing rule in column, that every regiment should march with the same front, that the regiment does which precedes it, right or left.

No alteration should be made in any circumstance of the march, which is to be taken up from the regiment in front, until arrived exactly upon the same ground upon which that regiment made the alteration.

No officer should ride between the divisions on a march, except general and staff officers, the execution of whose duty renders it necessary for them to pass in all directions.

When a battalion passes a defile, and there is no room for the officers to ride on the flanks of their divisions, half of those who are mounted pass at the head of the battalion, and half in the rear.

All breakings off to enter a defile, and all formations again when passed through it, must be done extremely quick, by the parts that double, or that form up.

A sufficient number of faithful and intelligent guides must always be ready to march at the head of the battalions and columns.

March *of the line*, in a collective sense of the word, is a military movement, executed upon established principles, governed by local circumstances, and influenced by the nature of the service for which it is performed. After a general has obtained an accurate knowlege of the country through which his army is to move, his next care must be the arrangement of all its different component parts, with which he will form his column of route.

MARCH *of the Column of Route.* The order in which a battalion should at all times move; that the columns of an army should perform their marches; that an enemy should be approached; and that safety can be ensured to the troops in their transitions from one point to another is in columns of divisions, and never on a less front than 6 files where the formation is 3 deep, or 4 files where it is 2 deep, nor does any advantage arise from such column, if it is an open column, exceeding 16 or 24 files in front, where a considerable space is to be gone over.

At no time whatever ought a column of manœuvre, or of route, to occupy a greater extent of ground in marching than what is equal to its front when in order of battle; no situation can require it as an advantage. Therefore, the marching of great bodies in file, where improper extension is unavoidable, must be looked upon as an unmilitary practice, and ought only to be had recourse to when unavoidably necessary. Where woods, inclosures, and bad or narrow routes absolutely require a march in file, there is no remedy for the delay in forming, and man may be obliged to come up after man; and if circumstances admit, and there are openings for their passage, the divisions or platoons may be faced to the left and wheeled to the right, and severally marched to the same front; but these circumstances, which should be regarded as exceptions from the primary and desired order of march on a greater front, should tend the more to enforce the great principle of preventing improper distances, and of getting out of so weak a situation as soon as the nature of the ground will allow of the front of the march being increased.

In common route marching, the battalion or more considerable column may be carried on at a natural pace of about 75 steps in a minute, or near two miles and an half in an hour: the attention of the soldier is allowed to be relaxed, he moves without the restraint of cadence of step, or carried arms; rear ranks are opened to one or two paces; files are loosened but never confounded; in no situation is the ordered distance between divisions ever to be increased, and the proper flank officers and under officers remain answerable for them.

If the column is halted, the whole must be put in march at the same time. The movement of the head division must be steady and equal; the descending of heights must not be hurried, that the part of the column ascending may properly keep up. Alterations occasioned by the windings of the route are executed without losing distance. Soldiers are not to break to avoid mud or small spots of water. The guides and pivots must trace out such a path for themselves as will best avoid small obstructions, and the men of the division will open from, and not press upon their pivots. When platoon officers are permitted to be mounted, each will remain on the flank of his division watching over its exactness, and that the proper distance of march is kept by the flank pivot and guide under the officer appointed to preserve it.

Where the arrival of a column at a given point is to be perfectly punctual, in that case the distance being known, the head must move at an equal cadenced step, and the rear must conform; and a guide, expressly appointed, will, at the head of the column, take such step as the nature of the route shall permit the column to comply with.

Nothing so much fatigues troops in a considerable column, and is more to be avoided than an inequality of march.— One great reason is, that the rear of the column frequently and unnecessarily deviates from the line which its head traces out; and in endeavouring to regain that line, and their first distances, the divisions must of course run or stop, and again take up their march. It is unnecessary to attempt the same scrupulous observances in common route marching, as when going to enter into the alignement; but even a general attention to this circumstance will in that case prevent unnecessary winding in the march, which tends to prolong it, and to harass the soldier.

When the probable required formation of the line will be to a flank, then the column of march is an open one, and except the cannon, no impediment or circumstance whatever must be allowed betwixt the divisions or in the intervals of battalions. When cannon can possibly move on the flank of the battalion, they ought, and mounted officers or bat horses must not be permitted between the divisions. If the probable formation may be to the front, then distances are more closed up, and bat horses, &c. may be allowed between the brigades of a column, but not between the battalions of a brigade.

It is always time well employed to halt the head of a considerable column, and enlarge an opening, or repair a bad step in the road, rather than to diminish the front, or lengthen out the line of march. No individual is to presume to march on a less front than what the leader of the column directs, and all doublings must therefore come from the head only. The preservation of the original front of march, on all occasions, is a point of the highest consequence, and it is a most meritorious service in any officer to prevent all unnecessary doublings, or to correct them as soon as made; no advantage can arrive from them, and therefore each commanding officer, when he arrives near the cause, should be assured that it is necessary before he permits his battalion so to double: on all occasions he should continue his march on the greatest front, that, without crowding, the road or openings will allow, although the regiment or divisions before him may be marching on a narrower front.

All openings made for the march of a column should be sufficient for the greatest front on which it is to march, they should be all of the same width, otherwise each smaller one becomes a defile.

At all points of increasing or diminishing the front of the march, an intelligent officer, per battalion or brigade, should be stationed to see that it is performed with celerity; and the commandant of a considerable column should have constant reports and inspections made that the column is moving with proper regularity; he should have officers in advance to apprize him of difficulties to be avoided, or obstacles to be passed, and should himself apply every proper means to obviate such as may occur in the march. (And at no time are such helps more necessary than when regiments are acting in line on broken ground, and when their movements are combined with those of others.) When the column arrives near its object of formation or manœuvre, the strictest attention of officers and men is to be required, and each individual is to be at his post.

The great principle on all occasions of diminishing or increasing the front of the column in march is, that such part as doubles or forms up shall slacken or quicken its pace, as is necessary to conform to the part which has no such operation to perform, but which continues its uniform march, without the least alteration, as if no such process was going on; and if this is observed, distances can never be lost, or the column lengthened out. Unless the unremitting attention and intelligence of officers commanding battalions and their divisions are given to this object, disorder and constant stops and runs take take place in the column; the soldier is improperly and unnecessarily harassed; disease soon gains ground in a corps thus ill conducted, which is not to be depended on in any combined arrangement, is unequal to any effort when its exertion may be required, and is soon ruined from a neglect of the first and most important of military duties.

The most important exercise that troops can attend to is the march in column of route. No calculation can be made on columns which do not move with an ascertained regularity, and great fatigue arises to the soldier. A general cannot depend on execution, and therefore can make no combination of time or distance in the arrival of columns at their several points. In many situations an improperly extended column will be liable to be beat in detail, and before it can be formed. Troops that are seldom assembled for the manœuvres of war, can hardly feel the necessity of the modes in which a considerable body of infantry must march and move.

The distance of columns from each other, during a march, depends on the circumstances of ground, and the object of that march, with regard to future formations. The more columns in which a considerable corps marches, the less extent in depth will it take up, the less frequent will be its halts, and the more speedily can it form in order of battle to the front.

On the combinations of march, and on their execution by the component parts of the body, does the success of every military operation or enterprize depend.—To fulfil the intentions of the chief every concurrent exertion of the subordinate officer is *required*, and the best calculated dispositions, founded on local knowlege, must fail, if there is a want of that punctuality of execution which every general must trust to, and has a right to expect from the leaders of his columns.

The composition of the columns of an army must always depend on the nature of the country and the objects of the movement. Marches made *parallel* to the front of the enemy will generally be performed by the lines on which the army is encamped, each marching by its flank, and occupying when in march the same extent of ground as when formed in line. Marches made *perpendicular* to the front of the enemy, either advancing or retiring, will be covered by strong van or rear guards. The columns will be formed of considerable divisions of the army, each generally composed both of cavalry and infantry: they will move at half or quarter distance, and the nature of the country will determine which kind of force precedes.

During a march to the *front*, the separation of the heads of the columns must unavoidably be considerable; but, when they approach the enemy, they must be so regulated and directed as to be able to occupy the intermediate spaces, if required to form in line. Some one column must determine the relative situation of the others, and divisions must be more closed up than in a march to a flank, and in proportion as they draw near to the enemy must exactness and attention increase. The general, in consequence of the observations he has made, will determine on his disposition: the columns which are now probably halted and collected will be subdivided and multiplied; each body will be directed on its point of formation, and the component parts of each will in due time disengage from the general column, and form in line.

The safety of marches to the *rear* must depend on particular dispositions, on strong covering or rear guards, and on the judicious choice of such posts as will check the pursuit of the enemy. In these marches to front or rear, the divisions of the second line generally follow or lead those of the first, and all their formations are relative thereto. The heavy artillery and carriages of an army form a particular object of every march, and must be directed according to circumstances of the day. The safety of the march, by the arrangement of detachments and posts to cover the front, rear, or flanks of the columns, depends also on many local and temporary reasons, but form an essential part of the general disposition.

March *in line*, must be uniformly steady, without floating, opening, or closing.

March *in file*, must be close, firm, and without lengthening out.

To March *past*, is to advance in open or close column, in ordinary or slow time, with a firm and steady step, erect person, the eye glanced towards the reviewing general.

The ordered or cadenced March.—The prescribed movements in military tactics. All military movements are intended to be made with the greatest quickness consistent with order, regularity, and without hurry or fatigue to the troops. The uniformity of position, and the cadence and length of step, produce that equality and freedom of march, on which every thing depends, and to which the soldier must be carefully trained, nor suffered to join the battalion, until he be thoroughly perfected in this most essential duty. Many different times of march must not be required of the soldier. These two must suffice.

Ordinary or *quick time*, and *slow* or *parade time*. The first 75 steps of 24 inches in a minute; the second of 60 steps of 24 inches in a minute.

In order to accustom soldiers to accurate movements, plummets, which vibrate the required times of march in a minute, have been recommended: musquet balls suspended by a string which is not subject to stretch, and on which are marked the different required lengths, will answer the above purpose. The length of the plummet is to be measured from the point of suspension, to the centre of the ball.

The several lengths are:—

	steps	*in.*	*hun.*
Ordinary or quick time in a minute . .	75—	24	96
Accelerated time . .	108—	12	3

Marching *by files*, is to march with the narrowest front, except that of rank entire or Indian file, which bodies of men are susceptible of.

The strictest observance of all the rules for marching, is particularly necessary in marching by files, which is first to be taught at the ordinary time, or 75 steps in the minute, and afterwards in accelerated time, or 108 steps in the minute.

In file marching, particularly at the drill, the whole of a company or squad, having been previously faced, are immediately to step off together, gaining at the very first step 24 inches.

The first adoption of file marching has been attributed to the Prussians, and the advocates for what is called the *Ordre mince des Prussiens*, the *thin* or *narrow* order, have in contradistinction named the *ordre prefond*, the deep order, or column, the French order. According to a very ingenious and lively writer, who has had frequent occasions to see the practice of both orders, the *ordre mince* or file marching, may be very useful during a march, but the deep order or column ought only to be depended upon in manœuvring before an enemy.

To March *according to time and measure, (marcher en cadence*, Fr.) Marshal Saxe, in page 23, art. 6. of the folio edition of his *Reveries* or *Memoites sur l'Art de la Guerre*, is of opinion, that marching to time and measure constitutes one of the essential requisites in war; he calls it indeed the principal one to be observed by troops who are going into action. By marching according to time and measure, we understand, that regular movement of a large body of men whose steps are cadenced and uniformly the same, and which are kept so by the artificial aid of music.

The marshal observes, that although military men will enter into much desultory conversation respecting the tactic, *(la tactique)* of the ancients, they seldom or ever understand the real definition of the word. It is, in fact, so much corrupted in modern times, that what really conveyed no more than a regular principle in marching, has since been made to signify the exercise and evolutions of troops. All the world know how to beat a march, without comprehending the real object, and half the world imagine, that the noise of a drum or fife is nothing more than military parade.

It is ridiculous to suppose, that martial sounds and military music, were first invented for the sole purpose of confounding each other on the day of battle. Let us indulge a better opinion of the good understanding of the ancients, particularly of the Romans, and endeavor to prove, that regularity in marching, (which depends wholly upon the cadenced step,) is the ground-work of military operations, and that nothing is more simple because it corresponds with nature. This was, in fact, the military step which the Romans brought to so great a perfection, and which has since been so closely followed by the Prussians. It was upon this principle, that marches were first devised, and that the drum was adopted to second the purposes. This is literally nothing more than a certain beat or *tact*, as the marshal expresses it, and which is evidently derived from the Roman word *tactum*, touch, and by means of which men may be taught to move in quick or slow time. As long as this principle can be followed up, the rear will never lag behind, soldiers will preserve the same step and march with the same foot; the wheelings will be made uniformly together, without confusion or delay; and the men will be less fatigued than if they were suffered to march or wheel at random. Every person of the least reflection or observation, will be convinced of the truth of this last remark. Let one man, for instance, be ordered to dance two hours, without the assistance of any sort of musical instrument, and let another, with the same bodily powers and activity, go through the same operation, during double the time accompanied by music, and let it then be determined which of the two has been most fatigued. It will evidently appear that the former has: for it is an unquestionable fact, that sounds of concord and harmony have a wonderful secret influence over the human frame, and that they render the exercises and functions of the body extremely easy. It is well known, that when the camel drivers wish to make their camels get on, they never flog or strike them with sticks, but sing, whistle, or repeat some humorous song.

Should it be asked what sort of music is best adapted to the human organs in military movements? It may safely be replied all those simple tunes which can be played by the fife and drum; I shall perhaps be told, (observes the marshal) that many men have no ear for music; this I deny, as far as the observation regards marching, which is a movement so easy to the human frame, that it comes, as it were, naturally to man. I have often remarked, that when the long roll has beat, the men in repairing to their several parades, have insensibly preserved the regular step, without knowing that they did so: nature, in fact, and instinct go together. If marching according to time and measure be considered in a mere superficial manner, the cadence step will undoubtedly appear of little importance; but if it be considered as an essential requisite to quicken or slacken the movement of troops who are going into action, it must be found an important object. No evolution, in fact, can be well done at close order without its assistance. The military step of the Romans, was the cadence or measured movement, and they were thereby enabled to march with ease upwards of 24 miles in five hours. This, however, would be looked upon as great exertion, if not fatigue, among some modern troops, although it constituted a principal part of the Roman exercise. Hence some opinion may be formed of the attention which they paid to that species of training, by which men were habituated to long marches; and this they accomplished by means of the *tact* or cadenced movement.

In order to prove the validity of our observations, let us, for a moment, imagine a thing which is scarcely possible to be accomplished by troops that do not march according to time and measure. Let us suppose, that two battalions, advancing to attack one another, should march up without floating, overlapping, or breaking in the least; under these circumstances, which would obtain the superiority? the one that should imprudently have commenced firing, or that which should have reserved its fire? Every intelligent and able officer will instantly determine in favor of the latter; and his decision would unquestionably be correct; for the former, besides being disheartened by seeing men advance against them with a reserved fire, would necessarily be retarded in their march in order to prime and load; and it must be evident to every man, that their antagonists would completely overthrow them by advancing with a rapid and cadenced step.

This was the plain and effectual method of the Romans. It may, perhaps, be said, that their ignorance of the use of gunpowder alters the case with respect to our manner of fighting. Let it, however, be recollected, that they fought with missile weapons, which did full as much mischief as our fire arms can produce. Gunpowder, in fact, is not so destructive as most people are apt to imagine. Few men are killed in regular fought actions, by the two armies engaging with musquetry only. Marshal Saxe does not scruple to assert, that it is impossible for a battalion of armed men to charge its enemy with vigor and effect, unless it preserve the cadenced step. For the ranks must unavoidably open during the march in line; and when the troops get within 50 or 60 paces of their opponents, the commanding officers see chasms, cry out *serre*, or close into the centre: and in the hurry of so doing, one rank overlaps another, and the centre itself becomes insensibly broken, standing eight or ten deep, while the wings are at two, three, or four. To remedy this defect, the whole line is halted, and if the enemy be wise enough to advance in regular order, during this operation, it is ten to one that he turns the flank of his opponent, and completely routs him. With regard to the musquetry firing, it may be laid down as a certain fact, that the mischief it does in pitched battles is more imaginary than real. It has been acknowleged by the most experienced officers, it is, indeed, positively asserted by marshal Saxe, (page 29 of the folio edition) that the closest vollies have produced little or no effect against a line of determined steady troops. I have seen, observes the marshal, a whole volley of cool directed musquetry, occasion the loss of no more than four men; while the troops against which it has been poured, have calmly marched up, reserved their fire till they got in contact with the enemy, and then amply revenged the deaths of their comrades by discharging their pieces and following up with the bayonet.

It is at this stage of the battle, that a real carnage commences, and its execution rests wholly with the victorious party; and we need scarcely add, that its success must be attributed to that composed, steady movement, or cadenced step, which enabled the troops to act together, when they came to close action. The military reader will be gratified by a perusal of two or three interesting anecdotes in pages 29, 30, 31, of the Reveries, fol. edit.

March *in prolongation of the line.*—This operation is gone through when a battalion standing in open column, with the pivot flanks of its divisions on the line, and advanced points being ascertained, moves forward at the word *march*, which is given by the commanding officer. Whenever the battalion wheels into open column, in order to prolong the line on which it was formed, and that no distant point in that prolongation is previously given, the serjeant guide of the leading company will advance 15 or 20 paces, and place himself in the line of the pivot flanks, and the leading officer will thereby (taking a line over his head) be enabled to ascertain the direction in which he is to move.

March *by the inversion of files, or countermarch.* A compound word signifying retrocession, backward movement, change of measures or conduct, any alteration, in fact, of an original conception or undertaking. Thus the countermarch of ideas in the mind is the precursor of the different changes made by the body. In a military sense it is variously applicable; and as every countermarch or backward movement necessarily implies a previous march, or forward movement, we shall extract under this article the most material instructions that have been published in good authors relative to the countermarch of the component parts of a battalion, &c. observing generally that the word countermarch may be applied to the most extensive scale of military operations. Thus a whole army which has advanced into an enemy's country, is said to countermarch when it not only ceases to make progress in a forward direction, but changes its whole plan of manœuvre, and treads back the ground over which it had advanced. To countermarch in a more desultory manner, means to quit different positions by the countermarching of detached bodies, by changing their relative fronts, without abandoning the field, or scene of general operation. In order to execute such evolutions and inversions with accuracy, every battalion should be well instructed in the prescribed methods of changing front by the inversion of its files to right or left, in front or in rear of a leading division, from and on its centre.

The Countermarch *by files.*—According to the last printed regulations, this movement is of two kinds. Either *successive* (the body being halted) by each file successively turning on its own ground, the moment it is disengaged by the departure of its preceding file: or *progressive* (the body being in motion) by each file turning when it arrives at the point from which the leading or head file first wheeled. In the first case the body must shift its ground to a flank a space at least equal to its front: in the second it will perform this operation of the countermarch on its original ground, exchanging flanks and fronts; so that what before stood as the leading or head division will become the rear of the column; or, if in line, what was the right flank fronting one way, will still remain the right flank fronting another. In both cases the pivots are in a small degree moveable, but they must be so as little as possible, since a solid and compact inversion of the files is as requisite to a true and close formation in line or column, as the lock-step is indispensible in every other movement by files.

Countermarch *by files in front of the battalion, &c.* In this case the front men become the pivots, on which every successive file turns, till the rear file gets upon the identical space of ground from whence the front file first wheeled.

Countermarch *by files in rear of the Battalion.* In this case the rear rank men become the pivots upon similar principles of movement. All countermarches of a battalion or greater body, must be made in ordinary time; of smaller divisions in general in quick time. The observations which have already been made, under the head *files*, with respect to a solidity and quickness of movement in each wheeling, and to an unity of step, (allowing for an increased length of it in the wheeling men) are especially applicable to the countermarch by files.

The Countermarch *of a battalion from both flanks on its centre, by files* In order to effect this movement and change of formation, the wings *face* outwards from the colors, which stand fast, and a serjeant remains at the point of each wing in order to mark the ground. At the word *march*, the right wing files successively close behind the rear rank, and the left wing before the front rank of the battalion, till they arrive at the points where each other stood. They then halt, cover, and front by word of command, looking to the colors which take their places. The commanding officer dresses the line if necessary.

The Countermarch *of the battalion, from its centre, and on its centre, by files.* The wings face inwards to the colors, which stand fast, and a serjeant remains to mark each flank. The whole then take three side steps to the right, by word of command, in order to disengage the centre. At the second word of command, the whole move on, and each file successively wheels into the centre as it arrives at and beyond the colors. As soon as each company is in the line from the colors to the flank serjeant, its leading officer *fronts* it. When the whole is formed, the colors countermarch, and every company dresses to the colors till otherwise ordered. It must be remembered, as a general rule, that in the countermarch from both flanks, no part of the battalion is fronted till the whole is on its ground. In the countermarch from the centre, the battalion begins instantly and successively to front by companies, as each is ready and on its ground.

The COUNTERMARCH *by companies or subdivisions, on the centre of a battalion or line*. Although this may be done by files, it has been allowed, that on account of the unavoidable openings which always occur in file marching, a battalion, or larger body, will be best enabled to execute that movement with quickness and rapidity, by the march of columns of companies or subdivisions in front. To effect this object, the battalion is cautioned to countermarch from its centre by subdivisions; one or two central subdivisions having wheeled the half circle upon their centre point, or countermarched into the new line, so that the front rank stands precisely where the rear rank did: one of the wings then faces to the right about, and both wheel inwards by subdivisions: they march along the rear and front of the formed division, and successively *wheel* up into their respective places on each side of those already arranged in the line. The subdivisions which wheel up to the rear, successively *mark time*, when they reach their ground. The officers who lead them must be particularly attentive to their wheeling points, by being at their proper front rank when they *halt* their subdivisions. They would otherwise pass the rear, and disfigure the formation.

If it be intended that the front rank of the directing company or subdivision, should stand on the identical line which it occupied before the countermarch, it will be placed in that direction. In that case, after the subdivision has wheeled inwards, the wing which is to march in rear of it, must shift a few paces to the flank, in order to get clear of the rear ranks, and then proceed.

When one flank of a battalion or line is to occupy the spot where the other one stands, its most expeditious movement to arrive at it, will be along the prolongation of the line. If the flanks are to exchange places with each other, the countermarch on the centre, or on a flank, is the best method by which that exchange can be effected. The single battalion may do it by files, if its ground be confined, but a line must do it by countermarch of divisions in open column.

The COUNTERMARCH *in column*, is the inversion of the different files which constitute the several divisions, subdivisions, or sections of which the column is composed. By which inversion the front of the column is completely reversed.

To COUNTERMARCH *a column, the right in front*, is to change the front, or aspect of the leading company, subdivision, or section, and to place it in the rear of its perpendicular formation. After the caution has been given to countermarch by files the whole will face to the right, by word of command. Each company or leading officer or serjeant, will immediately quit the pivot, and place himself on the right of his company, subdivision, or section, whilst his covering serjeant advances to the spot which he has quitted, and faces to the right about. At the word *march* the whole move. The leader in the first instance wheels short round to the right, and proceeds, followed by his files of men, until he has placed his pivot front rank man close to his serjeant, who remains immoveable. As soon as the leading officer or serjeant of each company, subdivision, or section, has countermarched the extent of his front, he instantly gives the words *mark time*, so as to have it squared and closed in to the right, which is now become the pivot flank, and on which the officer or serjeant replaces the person that had advanced to ascertain the exact point of perpendicular formation; and who falls back behind the rear rank; and when dressed, *halt*. By means of this inversion of the files, the column will face to its rear, each company, subdivision, or section, having its original follower its head or leading object.

To COUNTERMARCH *a column, the left in front*, is to make the left company, subdivision, or section, which is now in the rear of the column, become the head of it. After the caution, to countermarch by files, has been given, at the word *left face*, the whole face to the left, the officer or serjeant moves to the left of his company, subdivision, or section, and the person who has covered him, moves to his place, and faces about. At the word *march*, the officer turns short to the left, and proceeds as before until he is fixed on the left, which is now become the pivot flank, as the column stands with its right in front. In all countermarches, the facing is always to that hand which is *not* the pivot, but which is to become such. The countermarch of each division, subdivision, or section, separately on its own ground, is an evolution of great utility on many occasions. It enables a column which has its right in front, and is marching in an alignement, to return along that same line, and to take such new positions in it as circumstances may require, without inverting or altering the proper front of the line. In many situations of forming from column into line, it becomes a previous operation which ought not to be dispensed with.

When a column countermarches by divisions, each on its own ground, unless the divisions be equal, the distances after the countermarch will not be the true wheeling distances, but will be such as are equal to the front of the preceding division, and therefore the true distances must be regained before the divisions can wheel up into line with the accuracy and completion of space which are required.

MARCHING *past by the cavalry*.—At a review, or inspection, regiments, brigades, or lines, do not march past in column of squadrons, but in column of half squadrons.

In passing by in half squadrons at open ranks, the commander of the squadron will be in front of his leading half squadron, covered by the standard, with which the other officers of the half squadron dress. In the second half squadron all its officers are in front, and in one line. The trumpets are all in front of the regiment, and when they have passed, wheel quickly round, and remain posted opposite the general, and sound till the regiment has passed; when they cease, (and those of the succeeding regiments commence) follow their regiment, and regain its front.

The half squadrons, or divisions, will dress, and cover to the passing hand; after the successive wheel, which brings them on the line of passing, they will open ranks, 60 or 70 yards, before they approach the general, and close them about the same distance after passing, and they will continue so to dress, and preserve the line, till each division wheels at the point, where the head one has changed its direction: there, and not before, the dressing and covering will be made to the proper pivot flank of divisions.

The whole pass, (whether at open or close ranks) as one column; nor is any division, squadron, or regiment, to increase, or alter the distances it possessed, at the moment it wheeled from line into column.

In passing by half squadrons or divisions, at close ranks, the standard may take the centre of the front rank of the leading one. The commanding officer is before it, other officers are at their squadron posts, and care is taken, that there shall be an officer on each passing flank.

At the drawing of swords, and general salute, on the general's approach, the trumpets all sound the parade march. When the general passes along the line, each regiment successively sounds its own march, or such other as it shall be ordered, and the same is done by each regiment when it passes the general.

The general orders and field regulations have prescribed the soundings with which all generals, and other persons, are to be received; when they pass along the line, or the line before them, the trumpet soundings will be the same as when the president or governor of a state appears.

The trumpet flourish, in drawing swords, is used regimentally on their own ground, and is the sounding used in receiving a major general; it is repeated twice for a lieutenant-general, and to all superior generals the march is sounded.

In parade, to receive the president, or the commanding general, the trumpets are assembled on the right of their regiments, (whether single or in line) in two ranks, and the staff beyond them.—The staff does not march past.

On all occasions of exercise, and manœuvre, trumpets are behind their troops and squadrons, unless otherwise detached.

If the president sees a brigade, he will be received at the point of his approach in the manner already directed, by the general commanding it. If a single regiment, in the same manner by its commanding officer.

After passing in parade, and in movements, and exercise, it will depend on the commanding officer of the regiment, to place the other field officers at the head of squadrons, or to assign them the superintendance of wings, in order the better to assist.

In general, regiments manœuvre at too great a distance from the person inspecting them; they ought to terminate many of their movements and formations within 20 or 30 yards of where he stands.

Cavalry regiments, when dismounted, and formed in line, will have an interval of six paces between each.

When the regiments dismount, field officers, and adjutants, do not dismount, but remain on horseback.

When the dismounted line advances in front, at close ranks, general officers, and commanding officers of regiments, are behind the centre; other field officers are behind the flanks of the battalion.

When the dismounted line is at open ranks, field officers are on the flanks of the battalion, in a line with the men, and general officers, and commanding officers of regiments, are in front.

In passing on foot, all mounted officers are in front of the regiment, except the adjutant, who is in the rear.

General principles in MARCHING.—Where a large body is marching in column, or columns, through narrow ground, and when its parts are to be assembled beyond the defile in several lines, in a compact manner behind each other—such parts are not to begin to assemble when the leading one does, but the head of each line is successively first to come up to the ground on which it is to stand, and when it there halts, its proper followers (and not before) move into line with it, and thereby do not impede the bodies that are behind them, which are still in the defile, and are to perform the same operation.

When a new line to be marched, or formed upon, is taken up by guides, commanding officers of squadrons, of regiments, and all other persons whatever, will take care that during such operation they do not stand upon, or obscure the direction of that line. Too many guides should not be thrown out. In movements in column, commanding officers of squadrons, and regiments, should keep wide of the flanks, that the pivot leaders may more correctly follow each other, and that they themselves may the better see, and distinguish the relative situation of the whole.

We shall conclude our remarks on the principles of marching, by quoting a remarkable passage out of marshal Saxe's Reveries, which may serve to undeceive many with regard to the over-rated importance that is given to the expert handling of the firelock.

He justly remarks, that the manual and platoon exercise does extremely well to render the soldier easy under arms, but it should not engross the whole of our attention on that account. It is, perhaps, of all others, the least important branch in military acquirements, after the soldier has been taught to carry his firelock on his left shoulder, to prime and load with accuracy and dispatch, and to fire in platoon.

When once a soldier has been rendered master of these essential requisites, (and it requires little to make him so) the full possession of his legs and feet becomes the principal object of his attention.

The secret of all manœuvres, and the consequent issue of engagements, depend upon the legs. Hence the necessity of moving to time and measure, and the wise practice of teaching the cadenced step. Whoever attempts to drill a recruit without paying attention to this important object, must be ignorant of the first elements of war.

Il n'en est pas seulement aux elemens a qu'on appelle le métier de la guerre.—He does not even know the first rudiments of what is called the art of war.

These observations ought to be strongly impressed upon the minds of those persons who are too apt to devote all their time to the firelock, and consequently to neglect the more necessary object of marching, &c. Officers, in particular, should be taught to feel the justness of those principles of movement, by which large bodies are enabled to act together. The motions of the firelock are easily learned, but the various changes to which the human frame must submit in marching, require something more than mere mechanical operation.

March *of a train of artillery*.—It has been observed in page 192, of Muller's Treatise of Artillery, that the French march their artillery much in the same manner that the British do, with this difference, that the French artillery is divided into brigades. In page 191 of Muller's treatise on Artillery, we find the following detail of a march of English artillery:—

1. A guard of the army. 2 The company of miners, with their tumbrel of tools, drawn by two horses. 3. The regiments of artillery front guard. 4. The kettle drums, drawn by four horses, and two trumpeters on horseback. 5. The flag gun drawn by 17 horses, and five twelve pounders more, by 15 horses each. 6. Eleven waggons with stores for the said guns, and one spare, by three horses each. 7. Six nine pounders, drawn by eleven horses each. 8. Nine waggons with stores for the said guns, and one spare, by three horses each. 9. Five long six pounders, by seven horses each. 10. Seven waggons with stores for ditto, and a spare one, drawn by three horses each. 11. Five long six pounders, drawn by seven horses each. 12. Six waggons with stores for ditto, and a spare one, by three horses each. 13. Four long six pounders, by seven horses each. 14. Five waggons with stores for ditto, and a spare one, by three horses each. 15. Two howitzers, by five horses each. 16. Four waggons with stores for ditto, by three horses. 17. Six short six pounders, by two horses each. 18. Three waggons with stores for ditto, by three horses each. 19. Six royals, with their stores, in four waggons, by three horses each. 20. One 12 pounder carriage, by seven horses; one nine pounder carriage, by five; one long six pounder carriage, by five; two short, by two; one short and one long limber, by one horse; and two forges, by two each. 21. Twenty ammunition carts, by three horses each. 22. Nineteen waggons with musquet cartridges, and one spare, by three horses each. 23. Thirty waggons with powder, and one spare, by three horses each. 24. Thirty waggons with musquet shot, and one spare, by three horses each. 25. Twenty-five waggons with intrenching tools, and one spare, by three horses each. 26. Twenty-five waggons with small stores, and one spare, by three each. 27. Six waggons for artificers, with four spare, each by three. 28. Thirty-two baggage waggons, nine by four horses, and 23 by three. 29. Thirty pontoons, and three spare carriages, each by seven. 30. The artillery rear guard. 31. The rear guard from the army.

It must be observed that there are parties of gunners and matrosses marching with the guns: there are likewise some parties of pioneers interspersed here and there to mend the roads, when they are spoiled by the fore carriages.

We shall now present our military readers with an extract from a French work, which has appeared since the Memoires D'Artillerie, par M. Surirey de Saint Remy, and which may put them more especially in possession of the French manner of marching their artillery, than Mr. Muller has afforded.—We must however, at the same time, refer them for more copious information to the third volumn of Saint Remy, page 187 to 201.

In the last edition of the Dictionnaire Militaire, the following observations are made on this important operation.

When the troops in the advanced camp of the army begin to assemble, the commanding officer of the artillery repairs to head-quarters, and communicates with the commander in chief.—Utensils, stores, and ammunition, are forwarded to the camp, and every soldier is provided with ten or twelve rounds of ball cartridge, before he commences his march against the enemy.—These articles having been distributed, the waggons and horses return to the train of artillery, and proper dispositions are made to connect the whole line of march.

The horses belonging to the train are narrowly inspected by the lieutenant-general of artillery, who marks or rejects them according to his judgment, and sends one report of their actual state to government, and another to the master general of the ordnance. He gives directions to the captain-general of the waggon-train to arrange matters in such a manner with each provincial commissary belonging to the park, that the different captains may know what brigades fall under their immediate superintendance. The latter must not on any account leave the brigades with which they are entrusted during the march.

The ammunition waggons having been loaded, and the horses harnessed in, they are distributed into different brigades, and put in motion to join the main army, according to the following order:—

The first thing that precedes the march of a regular train of artillery, is a waggon loaded with utensils, such as spades, pick-axes, shovels, mattocks, wooden spades, with iron bottoms; grapples, hatchets, &c. These are under the care of a waggon-master, who is attended by forty pioneers to clear and point out the way.

In the rear of this waggon follow four four pounders, mounted on their several carriages, with every necessary appendage on each side, loaded with ball, and the cannoneers ready, each having a lighted match in his hand, and two steel prickers or *dégorgeoirs*. Next to these is a waggon loaded with different articles of ordnance, containing likewise one barrel of gunpowder, one ditto of ball, a bundle of matches, weighing together about fifty pounds, about fifty balls of the calibre of the guns and five or six sets stout drag-ropes or bricoles.

The military chest, and the king's or royal stores, generally accompany this small train, when the army consists of one column only.

The pontoons, with every thing belonging to them, follow next; and after them the crab with its appendages, accompanied by the captain of artificers, with a certain number of carpenters.

Next follow the heavy ordnance.

Those pieces of artillery which are mounted, follow each other according to their several calibres, with all their necessary implements for service hanging on each side.

Then come the frames belonging to the pieces of heavy ordnance, with their implements, &c. placed upon them. The mortars follow next.

After these follow the caissons belonging to the escorts of the park of artillery, military chest, quarter-master general, and captain of artificers or workmen, in which are contained the tools belonging to the different workmen and miners, together with the forges, &c.

The baggage belonging to the commanding officer of artillery, and to the several officers of the train, follow next, each waggon succeeding the other according to the rank of the several officers. It frequently happens, that the carriages with stores and provisions, and those belonging to the royal regiment of artillery move together.

After these follow the tumbrels with gunpowder, matches, sand-bags, ropes, fuses for bombs and grenades, proof-pieces, if there are any, plummets, hand grenades, mining tools, mortar-carriages, bombs, balls, according to the different calibres of cannon, tools, and instruments for pioneers, with the spare carts.

In order to secure the regular progress and march of these different classes, it has been usual among the French, to divide them into five brigades, each brigade under the command of an artillery officer; and the whole subject to the orders of the commandant of artillery. All the equipage belonging to the train is distributed among these five brigades, and each brigade takes care to bring up its proportion every day to the park or spot of rendezvous. These are subject to a roster among themselves, some leading, and others bringing up the rear, according to its arrangment.

Night-MARCHES. Whenever marches are undertaken in the night, great precaution should be observed on the part of the commanding officer of the troops, to attach two or three faithful and intelligent guides to each column or detachment; for it may very easily happen, that in moving a considerable detachment during the night, some troops or squadrons may lose themselves, especially where there are cross-roads, and difficult passes.

The commanding officer at the head of the detachment must march slow, provided the nature of his expedition will admit of it: and wherever he finds any bye-roads on the march, he must post a few men there to direct the succeeding squadron; which squadron is to repeat the same caution, and so on throughout the whole.

As it is almost impossible for squadrons to keep constantly close together; and as it almost always happens, that, in order to conceal a march from the enemy, no trumpet must be sounded, (which would otherwise serve for a direction in the night time) a good non-commissioned officer, with four or six men, must be appointed to the rear of every squadron, who are to divide themselves, and form a chain in the interval, between it and the one succeeding, in order to prevent any mistake of the road.

Before the detachment marches off, the officer commanding must be careful to exhort the officers leading troops or squadrons, strictly to observe all the above directions: he must also have several orderly men to attend him; and, if possible, two or three guides in front.

The advanced guard must be reinforced in the night time, and march at a small distance from the main body, and whenever it shall happen unexpectedly to meet the enemy, it must instantly charge with all possible vigor; on which account, and in order to be in continual readiness, it must always march with advanced arms.

Secret MARCHES, are made with a design to reconnoitre an enemy, surprize his camp, secure a post, or seize a place. They are likewise undertaken to succour troops that may be precariously situated, to relieve a besieged town, &c. It is in this service that a commander has occasion for his utmost sagacity and penetration, to prevent his being discovered or betrayed. In order to ensure success, the person who conducts the march, should have previously obtained good information relative to the different roads through which he is to pass, the disposition of the inhabitants, &c. He should also obtain correct intelligence respecting the situation of the enemy's out-posts, &c.—

To MARCH *for the direct purpose of fighting an enemy.* In order to effect this important operation with confidence and safety, every army that marches from a distant point towards the ground which is occupied by an enemy, endeavors as much as possible, to preserve its regular front, and to advance in order of battle. Whenever obstacles occur, and the ground becomes so confined, that the march in line cannot be preserved, the different squadrons and battalions must approach the enemy in such a disposition of columns, as to be able to form line in the quickest manner, and before the enemy could possibly attempt to make an impression on the advancing columns, by charging with his cavalry.

The general officers who command the several columns, in leading them forward must attentively observe each other's movement, so that their heads, at least, be upon a line; and that when they reach the ground where the whole are to deploy, this manœuvre may be accomplished with dispatch and safety, and the order of battle be fully made, out of the reach of the enemy's horse.

The general or commander in chief, with his aids-de-camp, &c. takes his ground in such a manner as to be able to see the effect of the first fire. From being thus conveniently situated, he will know what orders to send, whether to support that part of the line which has gained ground, or to replace any particular one that may have given way. In order to accomplish this double purpose, he either makes use of the troops which have been drawn up between the two lines, as circumstances may require, or detaches from the reserve, as he judges best for the service.

The instant the line is formed, and the enemy appears in sight, every general officer must be found at the head of his division, actively employed either in leading on the troops, entrusted to his skill and valor, or in speedily remedying every symptom of disorder which may occur throughout the whole extent of his command.

"The disposition of an army (to quote the words of mons. de Feuquieres) which comes to close action, differs essentially from that it assumes in a march, or previous movement. Were troops, indeed, to advance over a wide space of open and unembarrassed ground, the formation of them might be the same. But this is seldom or ever the case. The intervention of hills, woods, rivers, villages, and narrow passes or defiles, gives rise to so many obstacles, that a large body of men, such as constitutes an army, must necessarily be divided into many different corps, in order, that the collective force may arrive, at a given time, within the lines of a new camp, or within sight of an enemy.

On these occasions the movements of an army are attended with considerable risk, especially if the enemy has himself taken the field; for by ably manœuvring he may take advantage of the divided state of your army, and attack it piece-meal. The greatest precautions, however, are observed in modern warfare, which were either unknown to, or neglected by our ancestors. Most of these have already been discussed, as far as the limits of our undertaking would admit. The following additional observations may not, perhaps, be thought wholly superfluous.

In the first instance it will be necessary for the quarter master general, and for the different officers who compose the staff or etat-major of the army, to render themselves perfectly masters of the country through which the troops are to march. The corps of guides, especially if the march should be continued during the night, must be well chosen on these occasions; and the different captains that have the charge of them, are frequently to communicate with the principal officers on the staff, to facilitate the several movements. All the general officers must be in possession of correct topographical sketches of the country; and their aids-de-camp, &c. must not only know how to deliver orders, but they must themselves be able to calculate, (from a cursory view of the chart,) time and distance, The science of locality, has, indeed, become so manifestly useful in all military operations, that the French have formed regular companies of topographers, who accompany their armies; a new institution, at High-Wycombe, England, pays much attention to this branch of necessary knowlege.

Artificers and workmen with appropriate escorts, precede the several columns, in order to clear the roads, and to remove obstacles that occur. Light troops, and large detachments of cavalry, are pushed forward for the purpose of keeping the enemy in awe, and to send the earliest intelligence respecting his movements. Bridges are thrown across rivers with astonishing activity and dispatch; every thing in a word which relates to the movement of the army, is so well digested before-hand, and subsequently so well executed, that all the different corps cooperate, and readily succour each other should the enemy attack. The natural formation of the battalion is preserved, whether the grenadiers are disposed in front, or the light companies lead; and the several piquets come regularly up with the rear during the march, and are as readily stationed in the front when their corps halt.

When a forced march is undertaken for the specific purpose of rendering some design of an enemy abortive, it is the duty of the commissariat to have provisions ready at hand, during the transient halts which are made in this harassing and fatiguing enterprise.

It is usual for great armies to march in several columns, in conformity to the order of battle which has been laid down by the general or commander in chief, at the beginning of the campaign. Those battalions and squadrons which compose the right, take their line of march through that direction of the country: those which compose the left, preserve their relative time and distance in that quarter. The artillery and heavy baggage are generally disposed of in the centre column.

When an army marches directly forward to attack or meet an enemy, the artillery is almost always distributed in the centre: sometimes a brigade of that corps, with a body of select troops in front, precedes each column; but the heavy baggage invariably moves in the rear under cover of the reserve.

When an army marches through a woody or close country, the heads of the different columns are usually covered by a strong detachment of riflemen, preceded by squadrons of horse. Should the enemy be in your rear, when it is found expedient to make a movement, the hospital stores, ammunition, baggage, and artillery, escorted by some squadrons of horse, must be sent forward, and the best disciplined troops, with a certain quantity of artillery, are in that case to make up the rear guard. If the enemy should hang upon your flank (the right, for instance,) the artillery, stores, and baggage, must be conducted by the left: should the enemy direct his operations from the left, the same movements must take place on the right.

A small army may march in one column, having its artillery and baggage between the advanced and rear guards. Should it be brought to action, the dragoons and light cavalry belonging to the advanced guard will compose one wing, and the troops that are disposed of in the rear, will form the other: the infantry will be distributed in the centre with the artillery in its front.

The French seem to have paid the greatest attention to the various details and incidental circumstances which attend the march of any considerable body of troops. It was not, however, until the reign of Louis XIII. that any sort of regular system began to prevail. There was certainly less necessity for such an arrangement, because the baggage was by no means so great, nor was the train of artillery half so extensive. The only dangers, indeed, which were to be guarded against, when the enemy was near, seemed confined to the loss of baggage and artillery. These were, of course, provided against by every able general, who naturally observed the greatest secrecy with respect to his encampment, and practised various stratagems to conceal his *march* from the enemy.

Some very sensible observations, relative to the manner in which troops should be managed previous to an engagement, may be found in the *Rêveries de M. le Maréchal de Saxe;* and considerable information may be derived from *Les Reflexions de M. le Baron d'Espagnac*, on the best method of forming the infantry for battle. See *Supplément aux Rêveries*, page 19. See likewise *Oeuvres Militaires*, tom. 1. p. 124.

General observations on the march of troops. Observations from a French work, applicable to general service. When troops are ordered to march, four principal objects should be well considered, viz. locality, time, possible ambuscades, and the ultimate end for which the march is undertaken. In order to secure these important points, some topographers (without whom no army can be said to be well constituted, or its staff ably appointed) should be directed to give in plans of the country, to shew where it is intersected, where hills with their different incurvations appear, where the roads are narrow, where the ground is soft or marshy, and unfavorable to the passage of artillery, where intricate passes occur, where there are woods, hedges, rivers, or marshes, and finally where the country becomes totally impervious.

When these different objects have been well ascertained, and thoroughly digested at head quarters, the component parts of the army must be so distributed with respect to the battalions of infantry, squadrons of horse, artillery, and baggage, that the front of the leading column shall invariably correspond with the extent of the road or defile which is to be marched over.

When troops are ordered to march through an inclosed country, the whole army is divided into a given number of columns, which successively follow each other, and are encamped, cantoned, or quartered separately. Sometimes the country is cleared, as much as circumstances will admit, in order that the several columns may advance, while the artillery, under an escort of infantry on each side, and with cavalry distributed upon both wings of the army, makes the best of its way through the main road. Small detachments, consisting of active, spirited young men, headed by intelligent and enterprising officers, are sent forward to take possession of the different defiles, woods, passes, and to post themselves close to an enemy's post, for the purpose of blocking it up until the whole of the army has marched by.

The leading columns should always be composed of tried and steady soldiers; and the front of each should invariably consist of the best men in the army.

The advanced and rear guards must be well supported by infantry, with the addition of some light field pieces. The order of battle is so arranged, that the heavy ordnance, the baggage, and the greatest part of the cavalry, which can be of little use on the wings, may be distributed in the centre.

When it is necessary to cross a river, the artillery must be planted directly opposite to the post which the army intends to occupy, Considerable advantage will accrue should the river wind in such a manner as to form a rentrant angle in that particular spot, which advantage would be greatly increased by having a ford near.

In proportion as the construction of the bridge advances, some steady troops must be marched forward, and a regular discharge of musquetry must be kept up against the enemy on the opposite bank.

The instant the bridge is finished, a corps of infantry, with some cavalry, some pieces of artillery, and a certain number of pioneers, to fortify the head of the bridge, must be ordered over. Should there be the least ground to suspect an attack upon the rear guard, the inside tête de pont must also be fortified.

Proper precautions will have been taken to prevent any surprise during the construction of the bridge, and while the troops are crossing. Each side of the river above and below the bridge, will on this account have been well reconnoitred, to ascertain that there are not any armed barges or floating rafters with infernals upon them, kept ready to blow up the bridge, when a considerable part of the army shall have passed the river. If the preservation of the bridge be considered as an object, both ends must be fortified, and adequate guards stationed to defend them.

Each corps that marches separately, such as the advanced and rear guards, and the main body, must be provided with shovels, pick-axes, and a sufficient number of pioneers and guides, to clear the roads, and to direct it on its march.

The following general rules in route marching have been laid down by the celebrated Montecuculli:—

No officer or soldier is on any account to quit his post or rank. The battalion companies must never intermix with the squadrons or troops of cavalry. Squadrons or troops of cavalry must always take care not to leave such wide intervals between them, as will expose them to be suddenly cut off, or such contracted ones as might enable the enemy to throw them into confusion.

In summer, troops should quit their ground or quarters at day-break.

In winter, great care should be taken by the commissariat, to see that the troops are well supplied with fuel whenever they halt. During very inclement weather the march of troops should be greatly contracted.

Some steady old soldiers must be stationed at the different cross roads, to prevent the rear men from mistaking the line of march.

The leading columns of those troops that precede them, must instantly fall upon any body of the enemy that may attempt to oppose their progress.

Three things are always to be considered and well weighed, viz. whether there be much ground to apprehend a serious attack from the enemy; whether there be little ground to fear him; or whether there be no ground at all,

In the latter case each corps of cavalry and infantry, marches separately, and with its own baggage.

All convoys, containing stores and ammunition, move with the artillery accompanied by an officer from the adjutant or quarter-master general's department, who has the direction of the march, as far as regards the convoy itself; but cannot interfere with the artillery; the commanding officer of the latter being presumed to know best, when and where his park should halt, &c. A very sensible observation on this head may be found in a recent French publication, intituled, *Manuel des Adjudans Généraux*, by Paul Thiébault. The whole of which is published under the article STAFF in the *Am. Mil. Lib.* On the evening preceding a march, each corps is specifically furnished with the necessary orders in writing.

At the hour which is named in general orders for the troops to commence their march, the quarter-master general, and the captain of guides, repair to the advanced guard.

If the army has been encamped, the lines of entrenchment are levelled or cleared in such a manner, that the troops may move with an extended front. As soon as the troops have marched off, the different guards belonging to the camp will be withdrawn.

Pioneers must be sent forward to clear the roads, preceded by small detachments of light and select troops, together with estaffettes or mounted messengers and vedettes, who are to reconnoitre in front, rear, and round the wings of the army. To these must be added appropriate guards and escorts to accompany the artillery, and to protect the baggage. It will belong to this latter description of troops, to take possession of advantageous heights, to discover ambuscades, and to send a faithful detail of all they observe to head quarters. These communications will be made by the chief of the etat major who accompanies them.

The advanced guard of the army will be composed of one half of the cavalry, the main body will consist of the infantry, attended by pioneers and detached corps of light artillery, which will be preceded by an iron instrument made in the shape of a plough-share, for the purpose of tracing out the paths, which must be kept by the waggon-train. In the rear of the main body must follow the heavy ordnance, the baggage-waggons belonging to the several regiments, and the train of artillery. The other half of the cavalry will be disposed of in the rear-guard, in which the army stores and ammunition are to be escorted by a regiment of horse.

If the army should be divided, and march in different columns by indirect roads, a rendezvous or place d'armes must be marked out in writing, where the whole may conveniently meet on the line of march. The utmost attention must be paid to the selection of this spot, by the adjutant and quarter-master general, lest it should be exposed to a surprise from the enemy; on which account it is kept as secret as possible, lest any intelligence should be given to him by deserters or spies. The hour and the manner in which the several columns are to arrive, is specifically stated to the different leaders; and scouts, &c. are sent round the country to discover the enemy's movements.

If there should be any reason to apprehend an attack, the various precautions must be increased in proportion to the alarm.

An army must always march, if it possibly can, in that order from which it may easily and expeditiously deploy into line; that is, it should invariably preserve the order of battle; every column bearing a natural front towards the enemy. Montecuculli further adds, that an army must invariably march the right or left in front, and not from its centre.

Field-pieces, with a sufficient quantity of ammunition, shovels, spades, and pick-axes always at hand, must be disposed along the most vulnerable part of the rendezvous; these must be guarded by a body of cavalry and infantry, who are to be selected for that specific duty.

Care is likewise taken to lodge the baggage-waggons, &c. in the most secure and best defended spot.

The two first lines of the army will consist of the mounted artillery in front, next to which will stand the different squadrons of horse that are posted in intervals between the infantry battalions: after these will follow the train of caissons, &c. in as many files as the road will admit; then the stores and baggage, and finally the reserve.

Whenever the leading columns have passed an obstacle, the front man must be halted till the rear have completely cleared it likewise; and when the whole enters an open country, the line must be formed, and the march be continued in order of battle until a fresh obstacle occurs, when the troops must be prepared to pass the defile, the advanced guard leading, the main body following next, and the reserve bringing up the rear.

When an army is thus advancing, the right or left flank (according to circumstances) of its line of march, must be covered by rivers, and banks, rising grounds, or eminences; and if these natural advantages do not present themselves, artificial ones must be resorted to. These may consist of waggons, chevaux de friezes or other temporary means of defence; the quantity, &c. must depend upon the nature of the country, and the number of troops that compose the columns.

It is, however, impossible to set down general rules for all cases; these must vary with the manifold circumstances that occur, and the different designs which are to be accomplished or pursued.

When the movements of an army are to be concealed, the march must be undertaken at night through woods, vallies, and concealed ways; all frequented and inhabited places must be carefully avoided; no loud instruments must on any account be played; and if fires are made, they must only be lighted on the eve of breaking up camp; in which case they must be left burning, for the purpose of deluding the enemy into a supposition, that the troops have not moved.

Small parties of cavalry are sent forward to seize all stragglers or scouts from the enemy, or to take possession of the different passes. In order to avoid being discovered in the object of the march, a different road must be taken from the one which you really propose to march through; and a fit opportunity must afterwards be embraced to get into the real track. Before you march out of a town or fortified place, the utmost care must be observed to prevent your intended route from being conveyed to the enemy. On this account the troops must be first marched out, and the gates immediately shut upon the rear, so that no stranger, &c. may be able to slip out with the men.

During a march of this nature, the troops must be provided with subsistence, stores, and ammunition, to last out until the object is attained. No scout or vedette is sent forward, when an army, or any part of it, advances to take possession of a post or place, to succour a town, to surprize an enemy, in a close or woody country, by favor of the night, or in hazy weather, or on any occasion when orders have been given to oppose and fight every thing it meets.

When an army marches for the direct purpose of forcing a passage, which is guarded by an enemy, a feint must be made in one quarter, whilst the real object is vigorously pursued in another. Sometimes you must appear suddenly disposed to make a retrograde movement, and then again as suddenly resume your progress; sometimes march beyond the spot you wish to occupy, insensibly drawing off the enemy's attention; and whilst the whole army is thus pushing forward and is closely watched by its opponents, (who hang upon the flanks, and hug its line of march) let detached parties of cavalry and foot, that have lain in ambush, suddenly surprise the passage, and post themselves upon it.

When it is found expedient to advance rapidly into a country for the purpose of surprising an enemy, getting possession of a town or place, or avoiding superior forces, every species of baggage must be left behind (even the common necessaries of the men: if circumstances require,) the cavalry must be sent forward, and the infantry put in carts, carriages, and chaises, or mounted behind the dragoons. If there be spare horses enough in the different troops, or any can be procured from the inhabitants of the country, they must be led in order to relieve those that are double mounted, in the manner which is practised by the Tartars. Marches of this description and urgency, must be kept up night and day; and it is on such occasions that the value of a good staff or etat-major will have all its weight.

It must be observed, as a general maxim, that whenever troops are retiring from a weak position, or to avoid the approach of a superior force, the retreat must be so managed, as not to bear the least resemblance of a flight.

Order of MARCH, *which is observed in the Turkish army*; this order of march may be considered as the movement of an army that combines its several operations according to some established system of military art. The Turks usually divide this movement into three distinct operations: the first comprehends that by which troops of several denominations, and from different quarters, assemble together at some given spot or rendezvous. Such, for instance, is the march of various corps of militia, both in Asia and Europe, belonging to the Ottoman empire, who must necessarily pass through several quarters, and cross the sea, to form a junction. From the many inconveniences which troops must unavoidably experience on these occasions, and from the irregularity that always grows out of them, this *march* cannot be strictly called a systematic movement of the army.

The second order of march among the Turks is that which they call *alay*; when the troops arrive, under the command of their several bachas, at the camp or given spot of rendezvous, for the purpose of being reviewed by the serasquier, the grand vizier or the sultan. This order is observed likewise by the janizaries when they repair to a similar place.

The third order of march must be considered as a real military movement. It is that which is performed by the army that first takes up its ground in a regular manner, and encamps. This is the commencement or beginning of military marches, because from a situation or arrangement of this sort, troops either leave one camp to pitch their tents elsewhere, or return again to their old one after having made an attempt against an enemy's post, &c.

It is an established law in Turkey, whenever the sultan or grand vizier takes the field, to have their magnificent tents, with seven or five horse-tails displayed above them, regularly pitched on the plains of Constantinople, or in those of Adrianople, accordingly as the court happens to be in either of those imperial residences; which circumstance is announced throughout the empire, that every province, &c. may be made acquainted with the march of the sultan or grand vizier.

As soon as these pavilions or tents have been thus pitched, all the different armed corps that have not yet commenced their march receive their route: and those that are already on the march, advance with all the expedition they can, to the spot of general rendezvous. The troops from Egypt and Asia are particularly alert on these occasions, most especially if the war should be carried into Hungary. All the points from whence embarkations are to take place, appear conspicuously marked along the coast of the Marmora, Propontides, and the Archipelago, in order that the different bodies of troops may take the direct road to Constantinople, Andrianople, Philipolis Sophia, Nissa, and Belgrade, in which places was the general rendezvous of all the troops, when the Ottoman empire flourished. Those, however, were not included which were destined to act in Hungary and Bosnia. They met together, after having passed the bridge of Osek, and formed a junction with the main army. Kara-Mustapha followed these dispositions when he went to besiege Vienna.

The second march of the Turkish or Ottoman army, is a business of mere parade or ceremony. This movement is observed by all the different corps, and it is executed with great magnificence by the Bachas, particularly so when they repair the first time to the camp of general rendezvous.

With respect to the third march, it is a real and essential movement, and ought to be called the *military march* or *route*. Four principal branches or objects of service, constitute the nature of this march, and form its disposition. These are the cavalry, infantry, artillery, and baggage; in which latter are included the stores, &c. belonging to the Turkish militia, the royal provisions, public stores, and ammunition, comprehending gunpowder, shot, matches, spades, pick-axes, &c.

There is, however, no invariable rule attached to this arrangement, it alters according to circumstance and place.

The real or military march of the troops is entirely managed by the grand vizier, or the seraskier. Written instructions are issued out for this purpose; for the Turks never give out verbal orders, except in matters of little or no importance, or in cases of extreme emergency, when they cannot commit them to writing.

It is an invariable maxim among the Turks, whenever their troops are upon the march, to throw new bridges over rivers, or to repair old ones, to clear public or bye roads, to fill up ditches, and to cut down trees, &c. so as to facilitate their movements, and to obviate delay. They moreover throw up small heaps of earth, which they call *unka*, at the distance of half a league from each other, and often nearer, especially on high grounds. When the sultan marches at their head they make two heaps of this description.

The Turks pay very particular attention to their movements or *marches* on service: the whole of the army is under arms during the night, in order to make the necessary dispositions; on which occasions the soldiers make use of small vessels with fire lighted in them, and tie them to the ends of long pikes or poles. The greatest silence is observed during the march; neither drums, trumpets, nor cymbals are heard. Sometimes. indeed, but this rarely happens, the drummers belonging to the band of the grand vizier, accompany the salutes or ceremonial compliments which are paid by the salam-agasi, or master of ceremonies.

When they march through a country in which there is no cause to apprehend surprise or hostility, the infantry generally takes the lead, two or three days march, in front of the main army. The troops march in the loosest manner, being neither confined to particular companies, nor formed in columns. They chuse what roads they like best, halt where they please, and reach the camp in detached parties; with this injunction, however, that the whole must arrive at the spot of rendezvous before evening prayers.

Next to these follow the cavalry, headed by a general officer. Their march, notwithstanding his presence, is as irregular as that of the infantry. The men frequently halt out of mere laziness, and under pretence of refreshing their horses; and little or no attention is paid to system and good order. The baggage and ammunition waggons, together with such stores, &c. as are carried by beasts of burthen, move in the same manner.

When the army enters an enemy's country, the whole of the infantry is collected together, and marches in one body. The capiculy and the seratculy, for instance, form one column. There is this distinction, however, observed, that every janizary marches under his own colors, and every officer remains attached to his oda or company, for the purpose of executing, in the speediest manner, the commander in chief's directions.

The cavalry is often divided into two wings; it is likewise frequently formed in one body. Every man is ranged under his own standard. The squadrons are commanded by the alay-begs, who receive orders through the chiaous; and the other officers are near the bacha.

The baggage sometimes moves in the front, and sometimes in the rear of the janizaries. A particular body of cavalry, called topracly, are an exception to this arrangement: the men belonging to this corps are obliged to furnish themselves with all the necessaries of life, and consequently carry provisions, &c. with them in all their marches; which circumstance unavoidably creates much confusion.

The artillery is generally attached to the infantry; sometimes, however, it moves with the cavalry.

When the Turkish army marches through an enemy's country, it is covered by an advanced and a rear guard. The advanced guard is composed of five or six thousand of the best mounted cavalry. This body is under the immediate orders of a commanding officer, called *kialkagybacy*, whose appointment lasts during the whole of the campaign. The advanced guard usually moves six, seven, or eight leagues in front of the main body; but it falls back in proportion as the enemy retires. When there are bodies of Tartars or auxiliary troops from any of the rebellious provinces with the army, they are detached in front of the advanced guard, for the purpose of harassing the enemy's rear, pillaging the country, and committing those excesses which are not countenanced by regular troops.

The rear-guard generally consists of one thousand horse. It is the business of this body to escort the baggage safe into camp, and not leave it until the whole be securely lodged.

The Turks, in all their movements on real service, display uncommon activity; and their marches are generally so well managed, that an enemy runs the greatest hazard of being surprised.

Rogue's MARCH. A tune which is played by trumpeters or fifers of a regiment (as the case may be) for the purpose of drumming out any person who has behaved disorderly, &c. in a camp or garrison. Thieves, strumpets, &c. are frequently disgraced in this manner; being marched down the front of a battalion, from right to left, and along the rear: after which they are conducted to the gate of the garrison or entrance of the camp, where they receive a kick on the posteriors from the youngest drummer, and are warned never to appear within the limits of either place, under pain of being severely punished.

MARCHANDS, *Fr.* Slop-sellers, petty-suttlers. Men of this description always flock round and follow an army on its march. As they generally deal in articles which are wanted by the officers and soldiers, it is the business of every general to see them properly treated, to ensure their safety, and to permit them, under certain regulations, to have access to the camp. They should, however, be warily watched in some instances, especially upon the eve of a retreat, or before any advanced operation takes place. Spies frequently disguise themselves as pedlars, and under the mask of selling trifling articles, pry into the state of a camp, put indirect questions to the soldiers, and tamper with those who may seem disposed to act in a traitorous manner. Yet as armies cannot do without such men, they must be sanctioned, and it is the particular duty of the provost-marshal, and of the waggon-master general, to watch and superintend their motions.

MARCHE *accélérée, ou pas accéléré*, Fr. The time in which troops march to the charge—we call it the accelerated pace, the English formerly called it *double quick time*.

MARCHE *ordinaire, ou pas ordinaire*, Fr. Ordinary time.

MARCHE *précipitée, ou pas précipité*, Fr. Quickest time.

MARCHE *cadencée, ou pas cadencé*, Fr. March or step according to time and measure. It is likewise called the cadenced step.

MARCHE *non-cadencée, ou pas non-cadencé*, Fr. This step is likewise called *pas de route*, and signifies that unconstrained movement which soldiers are permitted to adopt in marching over difficult ground, and in columns of route

MARCHE *de Flanc*, Fr. Flank movement or march.

MARCHE *forcée*, Fr. a forced march.

Battre, sonner la MARCHE, *Fr.* To put troops into motion by the beat of drum or sound of trumpet, &c.

Gagner une MARCHE *sur l'ennemi*, Fr. To gain ground or time upon an enemy, which signifies to get in his front or upon his flanks, so as to harass or perplex him, or by any able manœuvre to get the start of him.

Dérober sa MARCHE, *Fr.* to steal a march.

Couvrir une MARCHE, *Fr.* to conceal a march.

MARCHES *d'armées, et ce que les soldats ont à faire quand la générale est battue*, Fr. column of route or general order of march which an army observes when it takes the field. See CAMP.

MARCHE, *Fr.* This word is likewise used among the French, to express the course or progress of a ship, or as we say, technically, the *way she makes*: hence *marche d'un vaisseau*.

MARCHER *par le flanc*, Fr. To march from any given flank.

MARCHER *en colonne avec distance entiere*, Fr. To march in open column at open distance.

MARCHER *en colonne à distance de section, ou en mass*, Fr. To march in column, quarter distance, or in mass.

MARCHER *en bataille ou en colonne d'attaque*, Fr. To advance in column for the purpose of attacking an enemy.

MARCHER *en bataille en ordre deployé*, Fr. To advance by the echellon march in deployed order.

MARCHER *en rétraite*, Fr. To retreat.

MARCHER *en bataille par le dernier rang*, Fr. To march in line rear rank in front.

MARCHER *au pas accéléré*, Fr. To march in quicker time.

MARCHER *le pas en arrière*, Fr. To take the back-step.

MARCHER *au pas ordinaire*, Fr. To march in ordinary time.

MARCHER *au pas précipité*, Fr. To march in quickest time, or charging time.

MARCHER *par le flank, droit, ou gauche*, Fr To march by the right or left flank.

MARCHER *en colonne, la droit ou la gauche, en tête*, Fr. To march in column, the right or left in front.

MARCHER *en colonne, serrée*, Fr. To march in close column.

MARCHER *en colonne ouverte*, Fr. To march in open column.

MARCHER, *en terme d'évolutions*, Fr. To march in line, &c. which see.

MARCHES. The limits or bounds between England, Wales, and Scotland, have been so called.

MARCHING *regiments*. A term given to those corps who had not any permanent quarters, but were liable to be sent not only from one end of Great Britain to another, but to the most distant of her possessions abroad. Although the word *marching* is insensibly confounded with those of *line* and *regulars*, it was originally meant to convey something more than a mere liability to be ordered upon any service; for by marching the regular troops from one town to another, the inhabitants, who from time immemorial have been jealous of a standing army, lost their antipathy to *real* soldiers, by the occasional absence of regular troops. At present, the English guards, militia, and fencibles, may be considered more or less as marching regiments.—The marines and volunteer corps have stationary quarters.

St. MARCOU. Two rocks upon the coast of Normandy, lying in a bite or bay between cape Barfleur and Point Percé, bearing south east from La Hogue nine miles, from the mouth of the river Isigny, north, eight miles, and distant from the body of the French shore about four miles. The surface of each island, which is 18 or 20 feet above the level of the sea at high water, comprises about an acre, and bear from each other W. by N. and E. by S. distant 200 yards. On the abandonment of an expedition to the islands of Chossé, in the year 1795, sir Sidney Smith, whose active and comprehensive mind, justly concluded that the contiguity of these posts to the continent, would materially facilitate communications with the royalists, took possession of them; and having drawn the Badger and Sandfly gun vessels on shore, gave to their respective commanders the direction of the spot upon which he was thus placed. These officers having constructed batteries, mounted in them the guns belonging to their vessels, and in the year 1796 block houses, with detachments of marines, invalids, and 12 artillery men, were ordered out by government.

The extreme annoyance of these rocks to the coasting trade of the enemy, at length determined them to employ a part of the division of the army destined for the conquest of England, in their recovery, and 15,000 troops being assembled at the Hogue, 9000 were embarked on the 6th of May, 1798, on board 52 gun-vessels; when so great was the solicitude to partake in this conceived certain prelude to their glory, that several of the fourth demi-brigade of the army of Italy, whose tour of duty did not entitle them to be thus employed, gave four and five crowns, each, to others to change with them. Perfectly acquainted with the situation of the islands, the French flotilla rowed towards them in the night of the 6th, and at the dawn of the morning of the 7th, the weather being perfectly calm, they were discovered in a body between the islands and the shore. They soon separated into three divisions, one of which, comprising the heavy gun brigs remained in that position, while the other two, consisting of large flat boats, carrying a long 18 pounder in the bow, and a 6 pounder in the stern, took positions to the north and to the south of the islands, with an intention to drop into the passage that separates them. An animated and well directed fire was commenced from the islands, and warmly returned by the enemy. The northern division having been driven by the ebb tide within a short distance of the east island, soon became disabled in their oars, and considerably increased its distance, while the attention of the two islands was principally directed to the southern division, which came with the tide, and with almost unexampled gallantry pushed to the attack; being however by the severity of the fire that was kept up, foiled in its intention of getting between the islands, when each island would be exposed to the fire of the other, it passed quickly to the westward of the west island, and pulling up on the northern side of that island, the defence of which was almost wholly dependent on the flanking fire of the east island, made another determined effort to land. This appears to have been the critical period of the day, and the discharge of grape shot from the islands was proportionate to the danger; the entire side of the commodore of this division's vessel was battered in, and she sunk; the others of the division beaten and disabled, retreated to their companions, and being reduced to the number of 47, they all retreated to La Hogue, amidst the deriding taunts and huzzas of the English, 400 of whom, with about 50 pieces of cannon, most of which were of a small calibre, and placed in works constructed by themselves, by vanquishing the advanced guard of the army of England, with the loss of 1100 killed, drowned, and wounded, dissipated the terrors of a French invasion. The action lasted two hours and ten minutes, during which time there were upwards of 100 pieces of cannon firing on the islands; notwithstanding which the loss on our side was only one killed and two wounded. *English Mil. Dict.*

MARDIKERS, *or Topasses*, a mixed breed of Dutch, Portuguese, Indians, and other nations, incorporated with the Dutch at Batavia, in the East Indies. Mardikers, in all probability, derive their name from some original adventurers, who left a place, called *Mardike*, about four miles from Dunkirk, and formerly subject to, or forming part of the seventeen United Provinces. When the Dutch took possession of that territory which is named Batavia, these adventurers were perhaps the leading party, and from their being called Mardikers, the natives in those quarters insensibly attached the term to all persons of European descent, or connection. All, in fact, who wear hats are distinguished among turban-nations by the appellation of Topasses, and Mardikers, and from that circumstance are confounded in the term, with respect to Batavia. *Eng. Dict.*

There is a mistake in this—the word *tope* signifies a *gun*, as well as a hat; those who carried guns instead of spears, were called *topasses*; the topasses of the Malabar coast, where in fact they were first embodied by the Portuguese, wore no hats, but turbans, and carried *matchlocks* or *topes;* a house in which guns are kept is called *tope kannah.*

MARECHAL *de camp*, Fr. a military rank which existed during the French monarchy, The person invested with it was a general officer, and ranked next to a lieutenant-general. It was his duty to see the army properly disposed of in camp or quarters, to be present at all the movements that were made; to be the first to mount his charger, and the last to quit him. He commanded the left in all attacks. The appointment, under this distinction, was first created by Henry the fourth in 1598.

Marechal-*general des camps et armées du roi*, Fr. A post of high dignity and trust, which, during the French monarchy, was annexed to the rank of Maréchal de France. Military writers differ with respect to the privileges, &c. which belonged to this appointment; it is, however, generally acknowleged, that the general officer who held it, was entrusted with the whole management of a siege, being subordinate only to the constable, or to any other Maréchal de France, who was his senior in appointment.

Marechal-*général des logis de l'armée*, Fr. This appointment, which existed during the old French government, and has since been replaced by the chéf de l'etat-major, corresponds with that of quarter-master general in the British service.

Marechal *de bataille*, Fr. a military rank, which once existed in France, but was suppressed before the revolution, or rather confined to the body guards. An officer, belonging to that corps, received it as an honorary title. Its original functions, &c. with respect to general service, sunk in the appointments of maréchal de camp, and major-général. It was first created by Louis the XIIIth.

Marechal-*general des logis de la cavalerie*, Fr. This appointment took place under Charles the IXth in 1594. He had the chief direction of every thing which related to the French cavalry.

Marechal *des logis dans la cavalerie*, Fr. The quarter-master of a troop of horse was so called in the French service. In the old system every infantry regiment had one *marechal des logis;* two were attached to each company of the gendarmes: each troop of light horse had likewise two; and every company of musqueteers had eight.

Marechal *des logis de l'artillerie*, Fr. an appointment which existed in France before the revolution, and which was in the gift of the grand master of the ordnance. This officer always accompanied the army on service, and was under the immediate orders of the commanding officer of the artillery.

Marechal *des logis pour les vivres* Fr. a person belonging to the quarter-master general's department, so called in the old French service.

La Marechale, *Fr.* Marshal's lady *i. e.* wife, was so called in France. We have already mentioned *la colonelle*, &c. This practice has indeed, of late, obtained in England, but not in the unlimited manner which prevailed among the French. We use it merely to distinguish two ladies of the same name and family, or neighborhood, viz. Mrs. Johnson, and Mrs. colonel Johnson; meaning thereby that the latter is the wife or widow of colonel Johnson.

MARECHAUSSEES *de France*, Fr. A species of military police, which has long existed in France. During the French monarchy there were 31 companies of *Maréchaussées à cheval*, or mounted police-men. After twenty years service the individuals who belonged to this establishment were entitled to the privileges of invalid corps, being considered as a part of the gendarmerie.

These companies were first formed for the purpose of preserving public tranquillity, and were distributed in the different provinces of the kingdom. They consisted of provosts-generals, lieutenants, exempts, brigadiers, sub-brigadiers, and horsemen. This useful body of men was first formed under Philip the first, in 1060: they were afterwards suppressed, and again re-established in 1720, as constituting a part of the gendarmerie of France.

The uniform of the Maréchaussées, or mounted police men, consisted of royal blue cloth for the coat, with red cuffs and linings; the waistcoat of chamoy-color, lined with white serge; a cloak lined with red serge, the buttons of plated silver placed in rows of three each, with intervals between them; horseman's sleeves, with six silver loops with tassels. The brigadiers and sub-brigadiers, had silver lace one inch broad upon their sleeves; their cloaks were made of blue cloth with red cuffs, and they wore silver laced hats. The private horsemen wore bandeleers.

There were other companies of Maréchaussées, who were particularly distinguished from the thirty-one we have mentioned. Such, for instance, as that of the constable, called the gendarmerie.

Marechaussees *de France, camps, et armées du roi*, Fr. That which was under the immediate direction of the provost-general of the isle of France, and that which belonged to the mint.

The first of these companies is said to have been formed under the first race of French kings: the second by Francis the first; and the third by Louis XIII. There were, besides, several small bodies of troops, composed of officers, and soldiers who had served, that remained stationary in the principal towns to assist the civil magistrates. Those in Paris consisted of three companies; the company belonging to the *lieutenant criminel de Robe-Courte*, or to that particular court of judicature which was superintended by the prevost de la Maréchaussée, and which Charles the IXth attached to the gendarmerie: the independent company of mounted police, called Guet à Cheval; and the company of the police or foot patrole, called Guet à Pied, which was again subdivided into two companies, in order that one might do the duty of the quays. These companies were under the immediate direction of the secretary of state for the interior department of Paris. The *guet de nuit*, or night patrole, seems to have been first established by Clotaire the second. The commanding officer of the patrole, or chevalier duguet, during the reign of St. Louis was called *miles-gueti*.

MARENGO, a plain and village in Italy, about one league distant from Tortona, so called. These spots have been rendered memorable in military history by the obstinate and decisive engagement which took place on the 14th of June, 1800, between the Austrians, commanded by general field marshal Melas; and the republican French army, under the direction and personal guidance of Bonaparte, the first consul. According to a very recent publication, translated from the French of Joseph Petit, horse grenadier in the consular guard, the effective number of each army was nearly as follows: the French army, at the moment the battle commenced, was computed from forty to forty-five thousand men, of which three thousand were cavalry: there were besides, from twenty-five to thirty pieces of cannon, in which were included two companies of light artillery: the Austrian army, according to the accounts of the best informed persons, contained from fifty-five to sixty thousand men, including the reinforcements which had just arrived from Genoa. From 15 to 18,000 of these were cavalry. The cannon amounted to fourscore pieces and upwards, two hundred ammunition waggons, well provided, besides an immense train of army implements, stores, and equipage. The French were extremely deficient in the latter articles, having been obliged for want of caissons, to put their ammunition upon tumbrils drawn by oxen.

The loss on both sides was enormous; that of the French was rendered more serious to the republic, by the death of general Desaix, to whose intrepidity, at a most critical juncture, the success of the day, and even the personal safety of Bonaparte were unquestionably owing. This admirable young officer, (for even his enemies pay homage to his virtues and talents) was called by the French and Austrian soldiers, *guerrier sans peur et sans rèprocbe*: an irreproachable and undaunted warrior. Without entering into a minute detail of this memorable action, we shall so far trespass upon the limited arrangements of our work, as to extract a passage from another French publication, which has been written by citizen *Foudras*, and may be found in the English translation from which we have already quoted:—

"It has already been shewn with what obstinacy both armies fought, (see page 64 of Petit's narrative) four times were the French driven back, four times did they return to the charge, and advance against the Austrians. At the very instant when the consul, surrounded by hostile shot, was reanimating his almost exhausted troops, general Desaix darted with impetuosity amidst the Austrian battalions, when he received his death wound from a musquet ball. He had only time to utter the following words to the son of the consul Lebrun, in whose arms he expired:—" Go and tell the first consul, that I die with regret in not having done enough to live in the memory of posterity!" See page 192, of Foudras's Biographical Notice.

CHASSE-*Marée*, Fr. The term means literally a Ripier, or man who brings fish from the sea-coasts to sell in the inland parts; but it has frequently been used to signify the cart or carriage itself on which he sits. According to the French construction of it, it may serve for several purposes, particularly for the speedy conveyance of small bodies of troops. It consists of a four wheel carriage, of equal height with a common axle-tree, having a platform sufficiently elevated to suffer the fore wheels to pass under it when on the lock. In the centre of this platform is an upright back, with a seat on each side, resembling the seat of an Irish car; so that about six soldiers might sit on each side, back to back,. On the platform, and attached to the axle-tree, nearly at each corner, are four stout stumps on knee-hinges, that allow them to turn down flat on the platform, or to be fixed upright when they serve, by a crutch which fits into a hole as a rest for rifles, or for a piece of horse light artillery; on the crutch being taken out it fits into the hole after the manner of a swivel on board ship.

MARGA SEERSHA, *Ind.* a month which partly agrees with October.

MARRIAGE. It is generally understood in the British service, that no soldier can marry without the previous knowlege and consent of his captain, or commanding officer. There is not, however, any specific regulation on this head. The regulations respecting the marriages of officers and soldiers in the old French service, were extremely rigid,

MARIN, *Fr.* Any thing appertaining to the sea. *Avoir le pied marin*, to have sea-legs, or to be able to stand the motion of a vessel in rough water, and to go through the different functions of navigation. *Marin* is likewise used to distinguish a sea-faring man, (*homme de mer*) from *Marinier*, which literally means a sailor.

La **MARINE.** The French navy is so called.

MARINE, implies, in general, the whole navy of a state or kingdom, comprehending all the dock yards, and the officers, artificers, seamen, soldiers, &c. employed therein, as well as the shipping employed by the merchants for military or commercial purposes; together with whatever relates to navigation, ship-building, sailors, and marines.

The history of the marine affairs of any one state is a very comprehensive subject; much more that of all nations. Not only the preservation of that share of commerce which the British possess, but its future advancement, and even the very being of Britain, as an independent nation, depend on the good condition and wise regulation of the affairs of the marine, than on the superiority of its naval power. The Delphic oracle being consulted by the Athenians, on the formidable armament and innumerable forces of Xerxes, returned for answer, "that they must seek their safety in wooden walls." To which the British affirm, that whenever their nation in particular has recourse to her floating bulwarks for her security and defence, she will find wealth, strength, and glory, to be the happy and infallible consequence.

MARINES, or MARINE FORCES, a body of soldiers, raised for the sea-service, and trained to fight either in a naval engagement or in an action on shore.—Officers of marines may sit on courts-martial with officers of the land forces. See British MUTINY ACT, Sect. 13.

The great service which this useful corps has frequently rendered, entitles it to a fair record in every publication that treats of military matters. In the course of former wars the marines have distinguished themselves by great perseverance, strict attention to duty, and unquestionable valor. At the siege of Belisle they rose into considerable notice, although they had, at that period, been only recently raised, and were scarcely competent to military discipline. When the marines are at sea, they form part of the ship's crew, and soon acquire a knowlege of nautical tactics. Their officers are directed by the admiralty, (under whose immediate control they serve,) to encourage them in every disposition to become able seamen; but no sea officer has the power of ordering them to go aloft against their inclination. During an engagement at sea, they are of considerable service in scouring the decks of the enemy, by firing musquetry from the poop, round top, &c. and when they have been long enough out to obtain good sea-legs, they are preferable to mere seamen, especially when the enemy attempts to board; in which case the marines can fraise the poop, quarter-deck, forecastle, &c. with their fixed bayonets, and prevent the completion of their design. In making this observation, we are necessarily led to recommend a more frequent use of the pike. Not only the seamen, but the marines, should be well exercised in the management of that weapon. The interior regulations for the several marine corps, have been well digested, and do credit to the establishment. If any fault can be found on that head, it must relate to the slops, which are given in too large a quantity, considering the little room that a marine must occupy on board. No commissions are bought or sold in the marines; every individual rises according to his seniority; but a marine officer never can arrive at the highest rank or pay which exists upon the marine establishment; one general, one lieutenant general, one major general, three colonels, and one lieutenant colonel commandant, being naval officers with those additional distinctions. It is not within our province to enter into the wisdom or the injustice, not to say ignorance of that policy, which with a series of indisputable claims to notice, still keeps the marine establishment upon the lowest footing of military honor and reward.

The marine forces have of late years been considerably augmented; and we make no doubt but they will continue to be so, from the many confessed advantages which are derived from the peculiar nature of their service. They at present consist of 140 companies, which are stationed in the following manner in three principal divisions:

Chatham companies		*Portsmouth* companies		*Plymouth* companies	
1st	71st	2d	72d	3d	73d
4th	74th	5th	75th	6th	76th
7th	77th	8th	78th	9th	79th
10th	80th	11th	81st	12th	82d
13th	83d	14th	84th	15th	85th
16th	86th	17th	87th	18th	88th
19th	89th	20th	90th	21st	91st
22d	92d	23d	93d	24th	94th
25th	95th	26th	96th	27th	97th
28th	98th	29th	99th	30th	100th
31st	101st	32d	102d	33d	103d
34th	104th	35th	105th	36th	106th
37th	107th	38th	108th	39th	109th
40th	110th	41st	111th	42d	112th
43d	113th	44th	114th	45th	115th
46th	116th	47th	117th	48th	118th
49th	119th	50th	120th	51st	121st
52d	122d	53d	123d	54th	124th
65th	125th	55th	126th	57th	127th
68th	128th	56th	129th	58th	130th
		59th	131st	60th	132d
		61st	133d	62d	134th
		63d	135th	64th	136th
		66th	137th	67th	138th
		69th	139th	70th	140th
40 comp.		50 comp.		50 comp.	

The siege of St. Jean D'Acre, fabulous as the defence of it may hereafter appear from the extraordinary means which were made use of to reduce the place, and the more extraordinary exertions which succeeded in preserving it, will long be remembered, by the two first rival nations in Europe, and will form a brilliant part of the records of the Turkish empire. When posterity shall read the account, it may doubt the relation in its full extent of wonderful hardihood on both sides; but it will rest satisfied, that the garrison of St. Jean D'Acre would not have resisted the first approach of Bonaparte's army, had not a handful of British marines stood in each breach his soldiers made, and communicated courage and perseverance to the natives of the place.

It has already been remarked, that the marines are nominally under the command of three general officers, who are admirals, or vice-admirals in the navy, and three colonels belonging to the sea service. The marines themselves never rise beyond the rank of colonel commandant in their own corps, but they may be general officers with respect to the army at large. According to the last printed list there is one colonel commandant, properly so called, with the rank of major general in the army, three colonels commandant and captains, two of whom have the rank of major general in the army; three second colonels commandant and captains, two of whom have the rank of major general in the army; nine lieutenant colonels and captains, six of whom have the rank of colonel in the army, and three that of lieutenant colonel; nine majors and captains, one of whom has the rank of major general in the army, and eight that of lieutenant colonel; making together twenty-five field officers, who are marines properly so called; and six superior officers, who belong to the navy.

To these may be added 116 captains of companies, two of whom have the rank of lieutenant colonel in the army, and one is lieutenant colonel by brevet; 24 captain lieutenants, 256 first lieutenannts, 276 second lieutenants, six adjutants, and three quarter masters. The list of those field officers who have been permitted to retire upon full pay, contains one colonel, one lieutenant colonel with the rank of major general, one major with the rank of major by brevet, in the army, 15 captains, 10 with the rank of major by brevet, and one with that of lieutenant colonel by brevet; eight first lieutenants, and three second lieutenants. There are four reduced field officers, two of whom have the rank of major general in the army, and one that of lieutenant colonel; 92 captains, one with the rank of captain in the army, one as field officer in the India company's service, and nine with the rank of major by brevet; six reduced captain lieutenants, 162 reduced first lieutenants, four of whom have civil employments; 136 second lieutenants, one of whom has a civil employment; and one reduced adjutant. There is one paymaster to the marine establishment, who does not hold any military situation.

The American marine corps, like the British, is a separate establishment; the true system for a military establishment, would be to have the whole force consist only of horse and foot; and all instructed alike in the uses of small arms and artillery; then a selection of artillerists and marines could always be made by skill and not as now by chance.

MARK, a note, character, &c. set upon a thing.

Mark also denotes money of account. The English mark is 13*s*. 4*d*.; among the Saxons it was equivalent to 7*s*. 6*d*. English money. It is also a money of account in Scotland, and formerly a silver coin, being equal to 13*d*. and one third English.

Gunpowder **Marks**. The different sorts of gunpowder are distinguished by the following marks on the heads of the barrels. All gunpowder for service is mixed in proportions according to its strength, so as to bring it as much as possible to a mean and uniform force. This sort of powder is marked with a blue L. G. and the figure ½, or with F. G. and the figure 3, whose mean force is from 150 to 160 of the eprouvette. This is the powder used for practice, for experiments, and for service. The white L. G. or F. G. is a second sort of powder of this quality. It is sometimes stronger, but not so uniform as the blue L. G. It is therefore generally used in filling shells, or such other things as do not require accuracy. The red L. G. F. G. denotes powder entirely made at the king's mills, with the coal burnt in cylinders, and is used at present only in particular cases, and in comparisons, and to mix with other sorts to bring them to a mean force. The figures 1, 2, or 3, denote that the powder is made from saltpetre obtained from damaged gunpowder; 4, 5, or 6, from saltpetre obtained from the grough. See pages 123, 124, of the Little Bombardier.

Mark *to shoot at*. A round or square piece of wood, which is generally painted in red and white circles, and has a black spot in the centre called the bull's eye. Soldiers should be frequently practised in shooting at a mark. At the commencement of the French revolution, particularly in 1792, previous to the battle of Jemmappe, the inhabitants of the different towns exercised themselves several times during the course of the day, in firing at a mark. The national guards did the same. By means of this laudable practice several expert marksmen were formed. We need scarcely add, that the advantages which the service in general derived from their skill, has been too manifest to be denied. It must be evident to every military man that corps of light cavalry, mounted light artillery, and numerous small bodies of marksmen, capable of acting together, or on detached and desultory duties, would answer all the purposes of home defence.

Mark *time*.—To mark time is to move each leg alternately in quick or ordinary time, without gaining ground. This is frequently practiced when a front file or column has opened too much, in order to afford the rear an opportunity of getting up; and sometimes to let the head of a column disengage itself, or a body of troops file by, &c.

Knights of St. Mark. An order of knighthood which formerly existed in the republic of Venice, under the protection of St. Mark the evangelist.

To be Marked. Marshal Saxe, in his reveries, proposes that every soldier should be marked in his right hand to prevent desertion. He recommends the composition which is used by the Indians; and grounds the propriety of his plan upon the custom which prevailed among the Romans, who marked their soldiers with a hot iron. We mention this as a suggestion grounded upon good authority: but we by no means recommend it as an adoption which would be palatable.

Marksmen, men expert at hitting a mark.

Light-armed Marksmen, men that are armed and accoutred for very active and desultory service. See Riflemen.

Austrian volunteer Marksmen, a corps which has been formed in the hereditary dominions of the emperor of Germany, and is daily increasing by recruits and volunteers from the Tyrol, &c. The success which has uniformly attended the French *Tirailleurs* in all their actions, has induced other nations to pay great attention to the formation of similar corps.

MARLINS, in *artillery*, are tarred white skains, or long wreaths or lines of untwisted hemp, dipped in pitch or tar, with which cables and other ropes are wrapped round, to prevent their fretting and rubbing in the blocks or pullies through which they pass. The same serves in artillery upon ropes used for rigging gins, usually put up in small parcels called skains.

MARON, *Fr.* a piece of brass or copper, about the size of a crown, on which the hours for going the rounds were marked, in the old French service. Several of these were put into a small bag, and deposited in the hands of the major of the regiment, out of which they were regularly drawn by the serjeants of companies, for the officers belonging to them. The hours and half hours of the night were engraved upon each *maron* in the following manner—*Ronde de dix heures, de dix heures et demie.* The ten o'clock rounds, or those of the half hour past ten.

These pieces were numbered 1, 2, &c. to correspond with the several periods of the nights; so that the officers for instance, who was to go the ten o'clock rounds, had as many *marons* marked 10, as there were posts or guard-houses which he was directed to visit. Thus on reaching the first, after having given the *mot*, or watchward to the corporal, (who, whilst he receives it, must keep the naked point of his sword or bayonet close to the chest of the person who gives it) he delivers into his hands the *maron* marked 1. These *marons* being pierced in the middle, are successively strung by the different corporals upon a piece of wire, from which they slide into a box called *bóete aux rondes*, or box belonging to the rounds. This box is carried next morning to the major, who keeps the key: and who on opening it, can easily ascertain whether the rounds have been regularly gone, by counting the different *marons*, and seeing them successively strung. This is certainly a most excellent invention to prevent a neglect of duty in officers, or non-commissioned officers.

Maron *d'artifice*, Fr. a species of firework, which is made with a piece of pasteboard in the shape of a parallelogram, one side of which is as five to three, so that fifteen squares equal among themselves may be made, three on one side, and five on the other; these are folded into the form of a die or cube, and filled with gunpowder. The effect produced by this firework is extremely beautiful.

MARQUE, or *Letters of Marque*, in *military affairs*, are letters of reprisal, granting the people of one state liberty to make reprisals on those of another. See Letters *of* Marque.

MARQUEE, a word corrupted from the French *marquise*, signifying a tent or cover made of strong canvas or Russia-duck, which is thrown over another tent, and serves to keep out rain. Its primitive etymology may be traced to *marquis*, or *marchio*, whence marchers, and marches.

The complete weight of a marquée is 1 cwt. 17lbs. ridge pole, 7 feet; standard 8 feet.

MARQUER *le pas*, to mark time.

Marquer *un camp*, Fr. to prick out the lines of an encampment.

MARQUIS, *marquess*, *marchio*, *margrave*, a title of honor given by letter patent to a person who holds a middle rank between the dignity of a duke and that of an earl. This word, like margrave, is derived from the high Dutch, or from the French *marche*, a limit, as the guard of the frontiers was entrusted to a marquis. The title itself is originally French, and was first known under Charlemagne. King Richard the second first introduced the dignity of marquis among the British, by creating Robert de Vere, earl of Oxford, marquis of Dublin; but it was a title without any office annexed to it.

Marquise, *Fr.* See Marquee.

Tendre une Marquise, *Fr.* to pitch a marquée.

Marquise, *Fr.* This word likewise means a species of *fusée volante*, which see.

MARS. According to the heathen mythology, the god of war was so called.

The French frequently use the word in a figurative sense, viv. *Les travaux de Mars*, the labors or exploits of Mars; *le métier de Mars*, the military profession.

MARSAGLIA; near Turin in Italy, at the battle of 24th September, 1693, Catinat defeated prince Eugene and the duke of Savoy; this battle and place are memorable for being the first at which bayonets were used at the ends of musquets, and to this the French owed the victory.

The MARSEILLOIS, or *Marseilles hymn*, a national march adopted by the French during the course of their revolution, and since regularly played in their armies when they go to battle. It is frequently accompanied, or rather succeeded by the *Cá Ira*, a quick lively tune; the former being calculated for slow or ordinary time, and the latter for quick movements.

MARSHAL, *Field*-MARSHAL, } in its primitive signification means an officer who has the care and charge of horses; but it is now applied to officers who have very different employments.—In a military sense, it means the commander in chief of all the forces. It is likewise given as an honorary rank to general officers who have no immediate command. See GENERAL.

MARSHAL *of France*, was an officer of the greatest dignity in the French army. It was first established by Philip-August, in the year 1185.

The French military institutions under the empire, has an establishment of marshals, which is a title of military honor given to generals of pre-eminent merit.

PROVOST-MARSHAL, an executive officer, whose duty is to see punishments put in force, when soldiers are condemned to death, or are to be otherwise chastised. Every army is provided with a provost-marshal general, who has several deputies under him. By the last general regulations it has been ordained, that in case the army should take the field in Great Britain, a deputy provost-marshal will be appointed to each district. The provost, under those circumstances, will frequently make the tour of the camp, and its environs, and will have orders to seize such persons as are committing disorders.

The provost-marshal will be particularly directed, in making his rounds, to execute the awful punishment which the military law awards against plundering and marauding.

And in order to assist him in the discovery of such persons as may be guilty of those offences, the regiments encamped nearest villages, will send frequent patroles into them, to apprehend such persons, as may be there without passes, or who having passes, may behave improperly.

If any soldier is base enough to attempt to desert to the enemy, he will suffer immediate death.

Any person forcing a safeguard will suffer death.

These punishments will attach equally to the followers of the camp, as to soldiers, and must be explained to them by the officers commanding the regiments by which such followers are employed.

The articles of war have decreed punishments for the following offences:—

Death is the absolute punishment for cowardice, or misbehaviour before an enemy, or speaking words inducing others to do the like.

For mutiny, or concealing a mutiny, desertion, sleeping on a post, or quitting it before relieved, plundering after victory, quitting a post in battle, compelling an officer to abandon or give up his post, or persuading others to do the like, corresponding with an enemy, and striking or refusing to obey any superior officer in the execution of his duty, a court-martial may inflict death, or any other punishment it may judge adequate to the offence.

The crimes of persuading others to desert, of concealing, assisting, or relieving an enemy; of being absent from the troop or company a soldier belongs to, absence from duty, drunkenness, and false alarms, are punishable at the discretion of a general or regimental court-martial.

All officers in the command of guards or detachments are enjoined to give assistance to the provost-marshal in the execution of his duty; and any officer or soldier impeding him in the same, or offering him any insult, will receive the most exemplary punishment.

MARSHY *ground*, *les marais*, Fr. As it may be frequently necessary to convey heavy ordnance, &c. over marshy ground, and sometimes indeed to erect batteries upon it, the following method has been recommended for those purposes:—

In the first place, a firm and solid road must be made, in order to convey, with safety, the different materials which may be wanted for the construction of the battery, and along which the men may securely drag the various pieces of ordnance. This road must be ten feet high at least.

If the marsh or bog should not be very deep, let a bed or platform, consisting of fascines, and disposed according to the direction of the road, be constructed between two rows of thick saucissons, that are secured and fixed in the earth with strong stakes. This platform must be two thirds as thick as the bog is deep, and contain 12 feet in breadth. Spread hurdles over the level surface of this platform, and then make another bed or covering with fascines, ten feet long, and disposed according to the breadth of the road, taking care to bind their ends, &c. well together by means of stakes, which must be driven through the hurdles and the lower bed. Let this second surface be sufficiently covered with earth and straw, to secure the fascines, and to render the road solid and compact.

If the road should appear unsafe after these precautions, it must be made wider and deeper.

If the marsh or bog be very deep, you must construct several beds or surfaces of fascines, in the manner already mentioned, taking care to make the top equal to the breadth of the road, and capable of supporting the weight of a waggon or carriage. The ground for the epaulement belonging to the platforms, their recoil backwards, and the path to the magazines, must be rendered firm and solid after the same manner. On each side of this epaulement you must throw up a berm or path, measuring three feet in front, and as much on the sides.

You will collect the earth, &c. in the usual way for the construction of batteries on rocks, and mask your artificers in like manner.

MARTEAU *d'armes*, Fr. an offensive weapon, so called from its resemblance to a hammer.

MARTIAL-*Law*, is the law of war, which entirely depends on the arbitrary power of the commander of the army when martial law is declared; and then the law of war is greatly influenced by the situation where war is carried on; by the conduct of the people in whose country the war exists: there are certain principles of humanity and honor, which all nations observe in time of war, which have the force of law; as the law of truces, the sacred character of ambassadors, &c. The laws that relate to the army are also branches of martial law.

MARTINET. A word frequently used to signify a strict disciplinarian, who sometimes gives officers and soldiers unnecessary trouble. It is supposed to have taken its origin from an adjutant of that name, who was in high repute, as a drill officer, during the reign of Louis the XIVth.

MARTINET, *Fr.* A small discipline, or cat o' nine tails, fixed to the end of a wooden handle, which schoolmasters use to punish refractory or idle boys. This affords us another path, and perhaps a surer one, than the surname already quoted, to find out the real origin of Martinet in a military sense, more especially as it is particularly indicative of the severity that is sometimes practised by what is, ridiculously enough, called a *tip-top* adjutant.

MARTINGAL, (*Martingale*, Fr.) a thong of leather, which is fastened to one end of the girths under the belly of a horse, and at the other end to the mussroll, to keep him from rearing.

MASHKAWAR, *Ind.* Monthly accounts.

A **MASK**, *Fr.* in field fortification, (*une masque.*) It sometimes happens, that a ditch or fossé must be dug in an exposed situation; in this case it will be absolutely necessary for the artificers and workmen to get under cover by means of masking themselves in such a manner as to answer the double purpose of executing their immediate object, and of deceiving the enemy with respect to the real spot they occupy.

To effect the latter purpose, several masks must be hastily thrown up, whilst the men are employed behind one; by which means the enemy will either mistake the real point, or be induced to pour his fire in several directions, and thus weaken its effect.

A mask is generally six feet high. Bags made of wad or wool are too expensive on these occasions; nor are gabions, stuffed with fascines, seven or eight feet high to be preferred; for if the fascines be tied together they will leave spaces between them in the gabions; and if they are not bound together, they will be so open at top as to admit shot, &c.

In order to obviate these inconveniences, the following method has been proposed:—place two chandeliers, each seven feet high, and two broad, between the uprights, after which fill up the vacant spaces with fascines nine feet high, upon six inches diameter. One toise and a half of epaulement will require two chandeliers, and 60 fascines, to mask it.

The engineer, or artillery officer places himself behind this mask, and draws his plan.

As you must necessarily have earth, &c. to complete your work, these articles may be brought in shovels, sacks, or baskets; and if the quarter from whence you draw them should be exposed to the enemy's fire, cover that line, as well as the line of communication, between the trenches, or the parallels, with a mask.

If you cannot procure earth and fascines, make use of sacks stuffed with wool, &c. and let their diameters be three feet, and their length likewise three, and let the outside be frequently wetted to prevent them from catching fire. See pages 828, 829, 830, Vol. ii. of the *Aide-Memoire a l'Usage des Officiers d'Artillerie de France.*

To **MASK**, (*Masquer*, Fr.) To cover any particular post or situation, for the purposes of attack or defence. In ambuscade, a battery is said to be masked, when its outward appearance is such as not to create any suspicion or mistrust in a reconnoitring or approaching enemy. A town or fortress, a battery, or the head of a bridge, may likewise be said to be masked, when a superior force sits down before them, and keeps the garrison in awe. This is frequently done, in order to render the advantages of such a place or hold ineffectual, while an army acts in its neighborhood, or marches by.

MASQUER *un passage*, Fr. To block

up any road or avenue through which an army might attempt to march.

MASSALGIES, *Ind.* Persons employed in India as porters or messengers. Massalgies, coolies, and palankeen bearers, are allowed a certain batta when they travel. *Mussal* is a torch; and *mussalgee* a torch bearer, a person who carries a flambeau to give light.

MASSE, *Fr.* A species of stock-purse, which during the French monarchy was lodged in the hands of the regimental treasurer or paymaster, for every serjeant, corporal anspessade, drummer, and soldier. The sum retained for each serjeant was vingt deniers per day; and ten deniers for each of the other ranks, according to the establishment, not the effective number of each battalion. Out of these stoppages a settled and regular masse, or stock-purse, was made up, and at the end of every month it was paid into the hands of the major or officer entrusted with the interior management of the corps, and was then appropriated to defray the expence of clothing the different regiments, and lodged in the hands of the directors or inspector-general of clothing.

That part of the *masse*, or stock-purse, which remained in the major's hands, and which was destined for the dress of the recruits, as well as for repairs of the regimental clothing, &c. could never be disposed of, or appropriated, without the knowlege and concurrence of the colonels commandant of regiments, the lieutenant-colonels, and other superior officers of the corps.

To this end it was customary for the major to call the commanding officers and oldest captains of the regiments together, in order to lay before them the actual state of the corps, to select some officer who should superintend the repairing of whatever was found necessary, and defray the lodging-money, &c. After this statement has been examined, the major must deliver in a faithful account of all the regimental debts that have been incurred; he must further explain how the last amount of the *masse*, or stock-purse, has been laid out, and specify the actual sum in hand, that a proper arrangement may be made, and that the repairs in the clothing, and the expences attending quarters, &c. may be duly ascertained.

The major was, on these occasions, directed to give his advice, with due respect and deference to his superior officers, and to suggest the best and cheapest method of fitting out and embellishing the regiment, carefully adhering to that system of œconomy which prevents it from running into debt. The statement of the several articles, with their appropriate expenditure, was specifically drawn out, and counter-signed by the colonel-commandant, and two or three of the oldest captains of companies. Their signatures served as vouchers for the major. By these means all internal cavils and disputes were obviated; the interior œconomy of the corps was well conducted, and a seasonable check was kept upon those officers who had the management of the regiment. Every thing, besides, came in a regular form before the inspector-general, under whose eyes all the accounts were ultimately laid; whether they regarded the recruiting service, or the clothing and distribution of necessaries.

MASSE *du regiment Royal Artillerie*, Fr. This corps, like other regiments in the old French service, had its masse, or stock-purse, formed by a certain stoppage or allowance for each serjeant, and for each master artificer in the corps of workmen; and for each corporal, anspessade, cannonier, bombardier, sapper, miner, under-master, artificer, apprentice, cadet, private artillery-man, and drummer.—These sums formed an aggregate masse, or stock-purse, which was regularly submitted to the director general of the school of artillery, and was laid out for the clothing of the different battalions, &c.

MASSE *des compagnies Franches d'infanterie*, Fr. The masse belonging to these companies was formed in the same manner, and was under the control of the director or inspector-general.

MASSE *de la cavalerie et des dragons*, Fr. Every brigadier, horseman, carabineer, hussar, dragoon, trumpet and cymbal player, and drummer, belonging to the old French cavalry, was subject to a certain stoppage from the allowances that were made, over and above their regular subsistence, for the purpose of forming their masse, or stock-purse.—This money remained in the hands of the regimental treasurer, who accounted for its application at the end of every month, and delivered a statement into the hands of the officer who was entrusted with its distribution; the same having been vouched for by the colonels-general of cavalry and dragoons.

In addition to these extracts from a French work, it may not be thought superflous to give the following more specific explanation of what was comprehended under the term of regimental *masse*, or stock-purse, that was made out of stoppages.

There were three sorts of *masses*, or regimental stock-purses in the old French service; two of which were sanctioned by authority, or the king's order. The third was confined to the interior management of each corps, but never appeared in any public regulation. On this account it obtained the appellation of *masse noire*, or *dark* and *unknown*.

The first *masse* directed by government to be attended to in every regiment, was called *masse* de *linge et chaussure*, or stock of necessaries, such as linen, shoes, &c. This masse was made up by means of a certain proportion of the recruit's bounty (amounting to 15 livres) which was kept in hand, and by the retention of a part of the daily pay of each soldier. The money, thus stopped, was destined to keep up the soldier's regular stock of shoes and breeches, as the king only allowed him one pair of each of those articles every year. He was likewise enabled thereby to provide himself with stockings, shirts, cravats or stocks, handkerchiefs, and gaiters; for every French soldier was obliged to produce at each monthly inspection of necessaries, one good pair of shoes, two shirts, two stocks or cravats, (one white and the other black,) two handkerchiefs, three pair of gaiters; one of which was to be white for parade duty, one of black worsted to mount ordinary guards, and one of black canvas for marching.

At the expiration of three months a regular account was made out of what remained unappropriated of the 15 livres, and of the masse in general, after the soldier had been supplied with the above specified articles. This statement was stuck up in every barrack-room, exhibiting the balance due to each man, who, on his side, was obliged to have a written counterpart, or schedule, of all the different articles, and of the exact sum in hand. When the captain of the company inspected the necessaries, each soldier was directed to produce this schedule, and to repeat its contents by heart.

Whenever it so happened, that 15 livres could not be kept in hand out of the soldier's bounty, he was permitted to work, the instant he could, with propriety, be dismissed the drill; for which indulgence, and in order to keep his firelock and accoutrements in good condition, he was obliged to pay six livres.

The second *masse* was for purposes of cleanliness and military appearance.—This *masse* grew out of the surplus of two or three livres, which was stopped out of the pay of the men that were permitted to work; and from a further stoppage of two deniers out of the daily pay of each soldier. Out of this *masse* the soldier was obliged to supply himself with pipe-clay or whiting, clothes brushes, shoe brushes, blacking, bees wax, emery, and hair powder, and powder bag, and to defray the expence of washing. He was likewise enabled thereby to pay a man for shaving. This man was attached to the company, and was called *Frater*, or Brother. The same practice prevails in most regiments belonging to the British service, with this difference, that there is not any direct authority to enforce the observance of it as a regulation.

In cavalry regiments, as in the infantry, the *masses* were formed by a stoppage of two or three livres out of the pay of those men that were allowed to work, and by the produce of the dung which was valued at two sols per day. There was likewise a further stoppage of two deniers out of the daily subsistence of each dragoon, by means of which he was regularly furnished with shovels, beesoms, and pitchforks for the stables.

The third *masse* (which, as we have already remarked, although distinguished by the appellation of *masse noire*, or dark and unknown, was still found indispensibly necessary for the interior management of each regiment) grew out of the surplus money that was given for discharges, (it being only required of each regiment to account to government for 100 livres per man) out of deaths and other casualties, and out of the money which had accumulated from men struck off the sick list. The regiment by means of this fund, (which may in some degree be considered in the same light that the stock-purse of a British regiment is,) made up the deficiency of the king's bounty, which was seldom or ever found enough to answer the purposes of recruiting. The persons employed upon this service were accordingly paid out of the *masse noire;* which was further increased by certain contributions that the men, who were permitted to work, voluntarily gave, in addition to the six or seven livres already mentioned.

Masse *d'armes*, Fr. a warlike weapon, which was formerly used. It consisted of a long pole with a large iron head.

MASSELOTTE, *Fr.* A French term which is used in foundery, signifying that superfluous metal which remains after a cannon or mortar has been cast, and which is sawed or filed off, to give the piece its proper form.

MASSIF, *Fr.* a short stick or rod, used by artificers in making cartridges.

MASSOOLAS, *Ind.* The most common and slightest boats made use of on the Coromandel coast.

MASSUE, *Fr.* a club.

MASTER *at arms*, in the *marine*, an officer appointed to teach the officers and crew of a ship of war the exercise of small arms; to confine prisoners, and plant centinels over them, and to superintend whatever relates to them during their confinement. He is also to observe, that the fire and lights are all extinguished, as soon as the evening gun is fired, except those that are permitted by proper authority, or under the inspection of centinels. It is likewise his duty to attend the gangway, when any boats arrive aboard, and search them carefully, together with their rowers, that no spirituous liquors may be conveyed into the ship, unless by permission of the commanding officer. In these several duties he is assisted by proper attendants, called his corporals, who also relieve the centinels, and one another, at certain periods.

Master *gunner*, in a *ship of war*, an officer appointed to take charge of the artillery and ammunition aboard, and to teach the men the exercise of the great guns. See Gunner.

Master *general of the ordnance.* See Ordnance.

Baggage-**MASTER** *and inspector of roads*, an appointment in the British service.

Barrack-**MASTER**-*general*, an officer with the rank of a major general in the British army, vested with considerable powers. These powers were formerly exercised by the board of ordnance, but they were transferred to the barrack-master-general by the secretary at war on the 30th day of May, 1794. In 1795 the two warrants, whereby all matters relative to the government of barracks had been partially entrusted to the board of ordnance, and a barrack-master-general, were revoked, and the following rules, orders, powers, and directions were established in lieu thereof, in as much as regards the duties of the department entrusted to the barrack-master-general to the British forces.

It is the duty of the barrack-master-general to erect and keep in repair all barracks that are not in fortified places; and all supplies of barrack furniture, utensils, and other stores for the troops, are to be furnished by him. The accommodation for royal artillery in barracks is under the direction of the barrack-master-general, excepting at Woolwich, or wherever there may be a separate barrack for the artillery, or a fixed station for that corps.

The commanding officers in barracks are, in all matters relative to the accommodation, disposition, and supply of the troops stationed therein, to be under the direction of the barrack-master-general; and all applications and requisitions are to be made to him.

Whenever any damage, except from fair wear and tear, has been done to barrack buildings, or any of the furniture or utensils have been injured, destroyed, or embezzled, a just estimate must be formed by the barrack-master; and if his demand be not immediately paid by the commanding officer, it shall be verified by affidavit of the barrack-master, submitted to the commanding officer, and if the answer be not satisfactory, the barrack-master-general is to certify the amount of the expence of making good the said injury to the secretary at war, in order that he may direct the same to be charged against the regiment, or detachment concerned.

In order to prevent the inconveniencies and injury which might arise from officers making alterations in the barrack-rooms, &c. the barrack-master-general is directed to have the use, for which each room is intended, lettered on the door; and if any officer shall attempt to make any alteration in any room, or convert it to any purpose, other than is so specified, or remove any of the furniture belonging thereto, the barrack-master (who shall always be permitted to visit the rooms at seasonable hours, whenever he desires so to do,) shall represent the same to the commanding officer, and in case immediate atten- n is not paid thereto, the barrack-mas- s strictly commanded immediately to report it to the barrack-master-general. And when any room shall not be occupied, the same shall be locked up, and no part of the furniture be removed therefrom.

No officer, or barrack-master, is, upon any account, to make any alteration or repairs at any barrack, or cause any expence to be incurred in providing any article relative thereto, without the direction of the barrack-master-general first obtained for that purpose.

On the 25th of March, 24th of June, 23d of September, and 24th of December, in every year, regular returns are to be transmitted by the barrack-masters to the barrack-master-general, of the state of the barracks, and of the furniture and utensils, both in use and store, specifying the actual condition of each, and the manner in which the apartments of the barrack or barracks, under their care have been occupied for the three months preceding; which return shall be countersigned by the commanding officers, who are directed personally and diligently to inspect the same.

The barrack-master-general is to take care, that a proper quantity of good and sufficient firing, candles, and other stores, be provided for each barrack every year. And the same is to be duly delivered out to the troops by the respective barrack-masters, at such times, and in such proportions, as are specified in the general regulations. The deliveries are to be vouched, not only by certificates of the actual amount, but also by accurate returns, stating the number in every troop, company or detachment, present at each weekly delivery. The said certificates and returns are to be given under the hand of the commanding officer in the barracks, and to be transmitted with the accounts. And a return thereof is without delay to be transmitted by the several barrack-masters, who from thenceforth are to remain accountable for the same to the barrack-master-general.

Half-yearly accounts of expenditures, with general returns of the receipts and issues, and the necessary vouchers for the same, are to be made up to the 24th of June, and 24th of December, in each year, and to be transmitted, within fourteen days after the said periods, to the barrack-master-general, who is to examine and settle the same without delay.

The issue of forage to the cavalry, is to be made according to a prescribed regulation. The officer commanding in each of the cavalry barracks, where forage shall be issued, is to transmit to the barrack-master-general a weekly return of the number of horses for which it has been delivered; and also the name and rank of each officer, with the number of horses for which he has received rations of forage. And at such periods as shall be required, by the barrack-master-general, the said commanding officer shall transmit to him, a general statement of the quantity of forage received and actually issued to the troops, the said certificate to be according to such form as shall be prescribed by the barrack-master-general.

Whenever small beer is to be issued to troops in barrack, it can only be supplied by such persons as shall have been approved by the barrack-master-general; and the delivery is to be vouched by a weekly return from the commanding officer, stating the number to whom it has been issued. And at such periods as shall be required by the barrack-master-general, the said commanding officer is to transmit to him a general statement of the quantity of small beer actually issued to the troops; the said certificate to be according to such form, as shall be prescribed by the barrack-master-general.

Every instance of neglect or misconduct which may occur in the management of barracks, must be reported to the barrack-master-general by the several officers commanding in barracks; and on the representation being judged sufficiently weighty, an inspector is to be sent down for the specific purpose of seeing every matter of complaint removed.

The barrack-master-general is authorised to take cognizance of all matters relative to accommodation, disposition, and supply, of the troops stationed in barracks, reporting thereupon, whenever it may be requisite, to the secretary at war, for the king's information. And all officers, and barrack-masters, are directed and enjoined to obey such orders and directions as the barrack-master-general shall find necessary to be given thereon.

The barrack-master-general is from time to time to receive imprests of money, for the current services of each year, upon estimates signed by him, and delivered into the office of the secretary at war. And at the end of each year, he shall make up and deliver into the said office, a general account of barrack expenditures for the preceding twelve months. The half-yearly accounts of the several barrack-masters, and the accounts of other persons to whom monies shall have been paid within the period on behalf of the barrack department (for the propriety, justness, and accuracy of which, as also for their strict conformity to the regulations, he shall be held responsible,) together with their acquittances, shall be the vouchers upon which the said general accounts shall be passed, and warrants shall be made out according to the royal sign manual. See pages 69 to 80, General Regulations.

Quarter-**MASTER** *of the victuals.* The person who had the chief care and management of the provisions belonging to an army was formerly so called. See PURVEYOR.

Scout-**MASTER**-*general.* A person, formerly so called, under whose direction all the scouts and army messengers were placed. The appointment does not exist at present.

MASULIT, a boat used in the East Indies, which is calked with moss.

MATCH, *in artillery*, a kind of rope slightly twisted, and prepared to retain fire for the use of the artillery, mines, fireworks, &c. Slow match is made of hemp or tow, spun on the wheel like cord, but very slack; and is composed of three twists, which are afterwards again covered with tow, so that the twists do not appear: lastly, it is boiled in the lees of old wine. This, when once lighted at the end, burns on gradually, without ever going out, till the whole be consumed. It is mounted on a lint stock.

Quick **MATCH**, used in *artillery*, made of three cotton strands drawn into lengths, and put into a kettle just covered with white wine vinegar, and then a quantity of saltpetre and mealed powder is put in it, and boiled till well mixed. Others put only saltpetre into water, and after that take it out hot, and lay it into a trough with some mealed powder, moistened with some spirits of wine, thoroughly wrought into the cotton by rolling it backwards and forwards with the hands; and when this is done, they are taken out separately, drawn through mealed powder, and dried upon a line. See LABORATORY.

MATCH.—The slow match used by the English is made by contract; one yard of it will burn about 8 hours. The French slow match is usually made by soaking light twisted white rope for three days in a strong lye. It burns about 3 feet in 6 hours.

Slow match was made at Gibraltar, during the last siege, in the following manner: eight ounces of saltpetre were put into a gallon of water, and just made to boil over a slow fire; strong blue paper was then wetted with the liquor, and hung to dry. When dry, each sheet was rolled up tight, and the outward edge pasted down, to prevent its opening: half a sheet, thus prepared, will burn 3 hours.

Quick MATCH *Compositions.*

Worsted Match.

Worsted . . .	10 oz.
Mealed powder .	10 lbs.
Spirits of wine . .	3 pints.
Water . . .	3 do.
Isinglass . . .	½ pint.

Cotton Match.

Cotton . .	1 lb.	12 oz.
Saltpetre . .	1	8
Mealed powder .	10	—
Spirits of wine .		2 quarts.
Water . . .		3 pints.

The worsted or cotton must be laid evenly in an earthen or other pan, and the different ingredients poured over it, and about half the powder being left a short time to soak, it is afterwards wound smoothly on a reel, and laid to dry, the remaining half of the powder is then sifted over it; and it is ready for use when dry.

The French have lately made their slow match by soaking the rope in a solution of sugar of lead and rain water: in the proportion of 3-4ths of an ounce of sugar of lead to one pint of water; and this they esteem as preferable to the old sort.

MATHEMATICS, originally signified any kind of discipline or learning; but, at present, denotes that science which teaches, or contemplates, whatever is capable of being numbered or measured; and accordingly is subdivided into arithmetic, which has numbers for its object; and geometry, which treats of magnitude.

MATHEMATICS are commonly distinguished into pure and speculative, which consider quantity abstractedly; and mixed, which treat of magnitude as subsisting in material bodies, and consequently are interwoven every where with physical considerations.

Mixed MATHEMATICS are very comprehensive, since to them may be referred astronomy, optics, geography, hydrography, hydrostatics, mechanics, fortification, gunnery, projectiles, mining, engineering, and navigation.

Pure mathematics have one peculiar advantage, that they occasion no disputes among wrangling disputants, as in other branches of knowlege; and the reason is, because the definitions of the terms are premised, and every one that reads a proposition has the same idea of every part of it. Hence it is easy to put an end to all mathematical controversies, by shewing, that our adversary has not stuck to his definitions, or has not laid down true premises, or else that he has drawn false conclusions from true principles; and, in case we are able to do neither of these, we must acknowlege the truth of what he has proved.

It is true, that in mixed mathematics, where we reason mathematically upon physical subjects, we cannot give such just definitions as the geometricians; we must therefore rest content with descriptions; and they will be of the same use as definitions, provided we are consistent with ourselves, and always mean the same thing by those terms we have once explained.

Dr. Barrow gives a most elegant description of the excellence and usefulness of mathematical knowlege, in his inaugural oration upon being appointed professor of mathematics at Cambridge.

The mathematics, he observes, effectually exercise, not vainly delude, nor vexatiously torment studious minds with obscure subtleties; but plainly demonstrate every thing within their reach, draw certain conclusions, instruct by profitable rules, and unfold pleasant questions. These disciplines likewise enure and corroborate the mind to constant diligence in study; they wholly deliver us from a credulous simplicity, most strongly fortify us against the vanity of scepticism, effectually restrain us from a rash presumption, most easily incline us to a due assent, perfectly subject us to the government of right reason. While the mind is abstracted and elevated from sensible matter, distinctly views pure forms, conceives the beauty of ideas, and investigates the harmony of proportions; the manners themselves are sensibly corrected and improved, the affections composed and rectified, the fancy calmed and settled, and the understanding raised and excited to nobler contemplations.

MATRAS, *Fr.* a sort of dart which was anciently used, and which was not sufficiently pointed to occasion any thing more than a bruise.

MATRON, a woman, generally the wife of some well behaved and good soldier, who is employed to assist in the regimental hospital. She is under the direction of the surgeon, by whom she is originally appointed to the situation. See NURSE.

MATROSSES, are properly assistants to the gunner, being soldiers in the British regiments of artillery, and next to them: they assist in loading, firing, and spunging the great guns. They carry firelocks, and march along with the guns and store-waggons, both as a guard, and to give their assistance on every emergency.

MATTER *of Deed*, in law, denotes something to be proved by witnesses, in contradistinction from *matter of record*, which may be proved by some process, &c. appearing in any court of record.

MATTER, in a military sense, especially with regard to courts-martial, consists of the specific charges which are brought against a prisoner, and to which the president and members most strictly confine themselves. It has been very properly observed, in a small pamphlet upon martial law, that unacquainted with the serious consequence of a strict attention to the minutiæ of form in criminal proceedings, general courts-martial have looked upon the first swearing in of the court, as a sufficient authority to warrant their proceeding on the trial of a variety of offences; whereas, in propriety, the court should be sworn afresh at the commencement of every new prosecution: for though, as judges, (in the manner of a court of common law) once swearing would be sufficient; yet, as jurors, who are sworn on every different trial, though identically the same men, so are the members of general courts-martial to be considered, when a new criminal and fresh *matter* are brought before them. Lest, however, an established, and therefore an undisputed practice, should have acquired a force still difficult to be eradicated, we shall endeavor to point out those reasons which induce us to maintain this opinion. In the oath which is taken by each of the several members of a general court-martial, the words *matter* and *prisoner*, are cautiously inserted. These words, therefore, being absolutely confined to a single matter, and a single prisoner, and *matters* and *prisoners* not being subjected to their jurisdiction, how is it possible that men, with propriety, can proceed upon a trial which they are not warranted by law to decide upon? Were the obligation in the Articles of War decisive as to the trial of all matters, and all persons, and in all cases; or were the court possessed of the authority of extending the meaning of the oath, once swearing would undoubtedly be sufficient; but, as in every respect, the contrary is evident, as the very words of the oath express that "*they shall well and truly try and determine according to their evidence, in the matter before them, &c.*" How can it be otherwise than an unwarrantable irregularity in them, to proceed upon the trial of offenders, who, in the eye of the law, are not amenable to their authority? For, if the *first* prisoner to be tried, has a right to challenge an officer, who may be appointed to sit on an investigation of his offence, as a member of a court of enquiry, or who may be liable to any exceptions, why shall not the *second* and *third* prisoner be entitled to the same merciful indulgence? See Thoughts on Martial Law, pages 25, 26, 27, 28.

Combustible MATTER, *and* MATTER *of composition.* All solids and fluids are so called which are of an inflammable nature themselves, and can communicate fire to other substances.

MATTUCASHLASH, an ancient Scotch weapon, sometimes called armpit dagger, which was worn there, ready to be used on coming to close quarters. This, with a broad sword and shield, completely armed the highlanders. Since the use of fire arms, this weapon has been laid aside.

MATTOCK. An instrument somewhat resembling a pickax, but having two broad sharp edges instead of points.

MATTRESS, a sort of quilted bed of straw, used by officers on service, instead of the feather bed, differing from the pallaisse in one particular only; the straw in the latter being loose, whereas that of the mattress is quilted in.

MAUG, *Ind.* The name of a month which partly agrees with our January and February.

MAUL, a heavy beater or hammer, generally shod with iron, used in driving piles, &c.

MAWANY, *Ind.* See KISTBUNDY.

MAXIMS, in *fortification.* See FORTIFICATION.

MEALED, pulverized, or reduced to powder.

MEAN *Fortification.* See FORTIFICATION.

MEANA, *Ind.* A machine or vehicle, a species of palankeen, but only used for carrying one person. It is borne by four men, and supported by means of a bamboo extended from the ends; being generally seven feet long, and three wide, with Venetian blinds, which slide and act as doors. Persons in India sometimes travel to a considerable distance in these vehicles; the number of bearers being increased, and successively relieved. It is computed that they will easily go at the rate of six miles in the hour.

MEASURE, in *geometry*, any quantity assumed as one, to which the ratio of other homogeneous or similar quantities is expressed.

MEASURE *of an angle*, the length of an arch described from the vertex to any place between its legs: hence angles are distinguished by the ratio of the arches between the legs to the peripheries. See ANGLE.

MEASURE *of a figure*, is a square, whose side is an inch, foot, yard, or other determinate measure. Hence square measures.

Among geometricians it is usually a square rod, called *decempeda*, divided into 10 square feet, and those into square digits, and those again into 10 lines, &c.

MEASURE *of a line*, any right line taken at pleasure, and considered as unity.

MEASURE *of the mass or quantity of matter*, in *mechanics*, is its weight: it being apparent that all the matter which coheres with a body, gravitates with it; and it being found by experiment, that the gravities of homogeneal bodies are in proportion to their bulks: hence while the mass continues the same, the absolute weight will be the same, whatever figure it puts on; for as to its specific weight, it varies as the quantity of its surface does.

MEASURE *of a number*, in *arithmetic*, such a number as divides another without leaving a fraction: thus 9 is a measure of 27.

MEASURE *of a solid*, is a cube, whose side is an inch, foot, yard, or other determinate length: in geometry, it is a cubic perch, divided into cubic feet, digits, &c. Hence cubic measure, or measures of capacity.

MEASURE *of velocity*, in *projectiles*, and *mechanics*, the space passed over by a moving body in any given time. The space therefore must be divided into as many equal parts, as the time is conceived to be divided into: the quantity of space answering to such portion of time, is the measure of the velocity.

Measures then are various, according to the different kinds and dimensions of things measured Hence arise lineal and longitudinal measures for lines or lengths; for square areas; and solid or cubic, for bodies and their capacities: all which again are very different in different countries and ages, and even many of them for different commodities. Hence also arise other divisions, of domestic and foreign, ancient and modern, dry and wet (or liquid) measures, &c.

Long MEASURE. The English standard long measure, or that whereby the quantities of things are ordinarily estimated, is the yard containing three English feet, equal to three Paris feet one inch and 3-12ths of an inch, or 7-9ths of a Paris ell. Its subdivisions are the foot, span, palm, inch, and barley-corn: its multipliers are the pace, fathom, pole, furlong, and mile.

TABLE, *which shews the length in English lines of the several long measures, and the relation of foreign measures to* 100 *English feet.*

LONG MEASURE.

Places.	Measure.	Length of each measure — Lines 100	Equiv. to 100 feet — num. 100
Aix la Chapelle	foot	136,90	105,19
Amsterdam	foot	134,25	107,26
Anspach	foot	140.63	102,40
Antwerp	foot	134,86	106,75
Augsburg	foot	139,88	102,94
Basil	foot	140,85	102,24
Bavaria	foot	105,05	137,08
Bergen	palm	41,87	343,92
Berlin	foot	146,27	98,45
Bern	foot	138,50	103,97
Bologna	paso	896,	16,07
	foot	179,20	80,36
Bremen	foot	136,58	105,43
Brescia	braccio	221,06	65,14
Breslaw	foot	134,25	107,26
Briel	foot	158,30	90,97
Brunswick	foot	134,77	106,86
Brussels	foot	137,43	104,78
Cagliari	palmo	95,67	150,52
Cairo	derah	262,	54,96
Catara	palmo	115,20	125,
Castille	paso	658,75	21,86
	foot	131,75	109,30
	palmo	98,81	145,73
China	foot for merchants	159,80	90,11
	foot for mathematicians	157,35	91,51
	kongpu for architects	152,45	94,46
	foot land measure	150,96	95,39
Cleves	foot	139,56	103,18
Cologne	foot	129,97	110,80
Constantinople	foot	334,50	43,05
Cracow	foot	168,33	85,55
Dantzic	foot	135,50	106,27
Denmark	faum	889,32	16,19
	foot	148,22	97,15
Dordrecht	foot	170,	84,71
Dresden	foot	133,65	107,74
Egypt	derah	262,	54,96
Embden	foot	139,88	102,94
England	foot	144,	100,
Erfurt	foot	133,28	108,05
Ferrol	codo	263,	54,75
	foot	131,50	109,50
	palmo	32,87	438,
Florence	braccio	258,90	55,62
France	toise	920,46	15,64
	pied de roi	153,41	93,86
	metre	472,27	30,49
Francfort on the Maine	foot	135,30	106,43
Geneva	foot	230,44	62,49
Genoa	palmo	118,58	121,44
Goes	foot	141,60	101,70
Gottingen	foot	137,43	104,78
Gotha	foot	135,85	106,
Greece	foot	144,68	99,53
Groningen	foot	137,97	104,37
Halle	foot	140,63	102,40
Hamburgh	foot	135,30	106,43
Hanover	foot	137,43	104,78
Harlem	foot	137,43	104,78
Hague	foot	153,41	93,86

LONG MEASURE.

Places.	Measures.	Length of each measure — lines 100	Equiv. to 100 feet — num. 100
Heidelberg	foot	131,57	109,44
Hildesheim	foot	132,26	108,88
Holland	foot	134,25	107,26
Holstein	foot	140,95	102,16
Inspruck	foot	150,	96,
Konigsberg	foot	145,32	99,09
Leghorn	palmo	32,87	438,
	braccio	258,90	55,62
Leipsic	foot	133.50	107,86
Leyden	foot	148,08	97,24
Liege	foot	135,85	106,
Lisbon	foot	159,92	90,05
	palmo long measure	106,62	135,06
	palmo short measure	103,56	139,05
London	foot	144,	100,
Louvain	foot	134,86	106,75
Lubeck	foot	137,43	104,78
Lunenburg	foot	137,43	104,78
Lyons	foot	161,40	89,22
Magdeburg	foot	133,92	107,53
Manheim	foot	137,	105,10
Mantua	braccio	219,70	65,54
Mastrick	foot	132,64	108,57
Mecklenburg	foot	137,43	104,78
Mentz	foot	142,23	101,25
Middleburg	foot	141,70	101,62
Milan	foot	187,50	76,80
Munich	foot	105,05	137,08
Muscovy	foot	158,	91,14
Naples	palmo	124,54	115,62
Neufchatel	foot	141,70	101,62
Nuremburg	foot	143,50	100,35
Oldenburg	foot	139,88	102,94
Osnaburg	foot	131,90	109,17
Padua	foot	167,25	86,10
Palermo	palmo	114,84	125,39
Paris	toise	920,46	15,04
	pied de roi	153,41	93,86
	metre	472,27	30,49
Parma	braccio	258,15	55,78
Persia	arisch	459,20	31,36
Placentia	braccio	258,14	55,78
Pomerania	foot	137,97	104,37
Prague	foot	142,55	101,02
Ratzeburg	foot	137,43	104,78
Reggio	braccio	250,20	57,55
Revel	foot	126,40	113,92
Rhine	foot	148,23	97,15
Riga	foot	129,45	111,24
	foot of Holland	134,25	107,26
Rimini	braccio	256,75	56,08
Rome	foot	139,14	103,50
	palmo	105,47	136,53
Rostock	foot	136,58	105,43
Rotterdam	foot	147,55	97,59
Rouen	foot	127,84	112,64
Russia	foot Rhenish	148,23	97,15
	foot English	144,	100,
Samos	foot	163,40	88,13
Sardinia	palmo of Genoa	118,58	121,44
	palmo of Cagliari	95,68	150,50
Siam	ken	453,85	31,73
Stade	foot	137,43	104,78
Stettin	foot	133,50	107,86

LONG MEASURE.

Places.	Measures.	Length of each measure — lines 100	Equiv. to 100 feet — num. 100
Stockholm	foot	140,20	102,71
Stralsund	foot	133,50	107,86
Strasburg	foot	136,66	105,37
Sweden	faum	841.20	17,12
	foot	140,20	102,71
Switzerland	foot	141,70	101,62
Turin	foot	152,56	94,39
Ulm	foot	136,48	105,50
Utrecht	foot	128,90	111,71
Valencia	foot	142,72	100,90
Venice	foot	164,07	87,77
Verden	foot	137,43	104,78
Verona	foot	164,07	87,77
Vienna	foot	151,28	95,18
Wirtemberg	foot	137,43	104,78
Wismar	foot	138,93	103,65
Zell	foot	137,43	104,78
Ziriczee	foot	146,60	98,23
Zurich	foot	141,70	101,62

The following examples will shew in what manner the proportion between the long measures of any two given countries may be ascertained.

Examples.

It is required to reduce 100 metres new measure of France into feet of Hamburgh.

The French metre measuring 472,27 English lines, and the Hamburgh foot 135,30, according to the table prefixed, I state the following equation:

100 metres = x
1 metre = 472,27 lines
135,30 lines = 1 foot
Result 349,05 feet.

Reduce 100 feet of Hamburgh into metres of France.

100 feet = x
1 foot = 135,30 lines
472,27 lines = 1 metre
Result 28,65 metres.

TABLE, *which shews the contents in English square feet of the several land measures, and the relations of foreign measures to 100 acres English measure.*

LAND MEASURE.

Places.	Measures.	contents of each measure — squ. feet.	Equiv. to 100 acres. — num. 100
Amsterdam	morgen	87630	49,71
Basil	juchart	34368	126,75
Berlin	great morgen	61182	71,20
	little morgen	27531	158,22
Bern	juchart field measure	28979	150,32
	juchart forest measure	41729	104,39
Dantzic	morgen	59927	72,69
Denmark	tœnde-hart-korn	118715	36,69
England	acre	43560	100,
Florence	soccate	53461	81,48
France	arpent *de Paris*	36865	118,16
	arpent *des eaux et forêts*	55071	79,10
	hectare	107830	40,40
Franconia	morgen	39157	111,25
Geneva	journée	55707	80,02
Hamburgh	morgen	135941	32,04
Hanover	morgen	28050	155,29
Ireland	acre	70560	61,73
Rhine	morgen land measure	18354	237,33
	ditto for forests	24472	178,
	ditto for vineyards	16994	256,32

LAND MEASURE.

Places.	Measures.	Contents of each measure — squ. feet.	Equiv. to 100 acres — num. 100
Rhine (continued)	thauen	13767	316,40
	juchart	9178	474,60
Russia	dessaetina	124620	34,95
Saxony	acker	59450	73,27
	morgen, Dresden measure	29725	146,54
Schleswig	pfluge	190350	22,88
Scotland	acre	55354	78,70
Spain	fanegada	48215	90,35
	aranzada	40514	107,52
Sweden	tuna land measure	53218	81,58
Switzerland	fauxe	70818	61,51
	morgen	35409	123,02
Vienna	jochen	63728	68,35
Wirtemburg	great morgen	61182	71,20
	little morgen	35849	121,51
Zurich	juchart	34941	124,67
	ditto for forests	38823	112,20

The following examples will shew in what manner the proportion between the land measures of any two given countries may be ascertained.

Examples.

It is required to reduce 100 dessaetinas of Russia into fanegadas of Spain.

The dessaetina measuring 124620 square feet of England, and the fanegada 48215, according to the table prefixed, I state the following equation:

100 dessaetinas = *x*
1 dessaetina = 124620 square feet
48215 square ft. = 1 fanegada
Result 258,47 fanegadas.

Reduce 100 fanegadas into dessaetinas.

100 fanegadas = *x*
1 fanegada = 48215 square feet
124620 square ft. = 1 dessaetina
Result 38,69 dessaetinas.

TABLE, *which shews the length in English feet of the several itinerary measures, and the relation of these measures to 1 degree of the terrestrial meridian, equal to 364420 English feet.*

ITINERARY MEASURE.

Places.	Measures.	Length of each measure — Feet.	Equiv. to 1 degree — num. 100
Arabia	milla	6441	56,58
Brandenburg	meile	34725	10,50
Denmark	mil	24704	14,75
England	mile by land	5280	69,02
	mile by sea	6073⅔	60,
	league marine	18221	20,
Flanders	mille	20587	17,70
France	lieue terrestre	14576⅘	25,
	lieue moyenne	16398	22,22
	lieue de poste	12784	28,50
	lieue marine	18221	20,
	myriametre	32797	11,11
Germany	meile	20587	17,70
	meile geographical	24294⅔	15,
Hamburgh	meile	24704	14,75
Holland	meile	19212	18,97
Hungary	meile	27378	13,31
India	parasang	12147⅓	30,
Ireland	mile	9110½	40,
Italy	milla	6073⅔	60,
Lithuania	meile	29336	12,42
Persia	parasang	16356	22,28

ITINERARY MEASURE.

Places.	Measures.	Length of each measure — Feet.	Equiv. to 1 degree — num. 100
Poland	meile	18221	20,
Portugal	legua	20245$\frac{5}{9}$	18,
Prussia	meile	25409	14,34
Russia	werste	3500	104,12
Saxony	meile	29700	12,27
Scotland	mile	5952	61,23
Silesia	meile	21250	17,15
Spain	legua of Castille	21958	16,60
	legua juridica	13724	26,55
	legua maritima	18221	20,
	milla maritima	6073$\frac{2}{3}$	60,
Sweden	mile	35050	10,40
Switzerland	meile	27450	13,28
Turkey	berri	5476	66,55

The following example will shew in what manner the proportion between the itinerary measures of any two given countries may be ascertained.

Reduce 1 myriametre new French measure into miles of England.

The length of the myriametre being 32797 English feet, and that of the mile 5280, I state the following equation:

1 myriametre = x
1 myriametre = 32797 feet
5280 feet = 1 mile
Result 6,21 miles.

TABLE, *which shews the quantity of English cubic inches contained by each of the corn measures, and the relation of foreign measures to 10 quarters Winchester measure.*

CORN MEASURE.

Places.	Measures.	Contents of each measure — cubic in.	Equiv. to 10 quarters — num. 100
Abbeville	setier	9355	18,63
Agen	sac	5332	32,68
Aire	raziere	6136	28,40
Aix la Chapelle	fas	1460	119,35
Alckmaar	sack	4938	35,29
Alexandria	rebebe	9578	18,19
	kisloz	10407	16,74
Algiers	caffise	19485	8,94
Alicante	caffise	14901	11,69
Amersfort	mudden	13986	15,68
Amiens	setier	2003	87,
Amsterdam	last	177916	,98
	mudden	6590	26,44
	sack	4942	35,26
	scheepel	1647	105,77
Ancona	rubbo	16645	10,47
Antwerp	viertel	4701	37,07
Apenrade	tonen	8355	20,85
Archangel	ozetwer	11888	14,66
Arensburg	last	187262	,93
Arles	setier	3628	48,03
Arnheim	mouver	8080	21,50
Augsburgh	schaf	26787	6,50
Avignon	boisseau	5612	31,05
Avila	fanega	3311	52,62
Azores	alquier	730	238,54
Barcelona	quartera	4238	41,11
Basil	sack	7866	22,15
Bautzen	scheffel	6657	26,17
Bayonne	conque	2503	69,61

Corn Measure.

Places.	Measures.	Contents of each measure — cubic in.	Equiv. to 10 quarters —, num. 100
Beaucaire	setier	3703	47,05
Beauvais	tonneau	118529	1,47
Bergamo	staja	1263	138,
Bergen op Zoom	fister	2818	61,83
Berlin	scheffel	3315	52,26
Bern	mutte	9650	18,06
Bilboa	fanega	3510	49,64
Bois-le-Duc	mouver	8671	20,09
Bologna	corba	4499	38,73
Bordeaux	boisseau	4678	37,25
Boulogne	setier	10525	16,55
Breda	viertel	5306	32,84
Bremen	scheffel	4336	40,19
Breslaw	scheffel	4262	40,89
Brest	tonneau	84200	2,07
Briel	sœcke	4380	39,78
Bruges	hoeden	10157	17,15
Brunswick	scheffel	18963	9,19
Brussels	sack	7110	24,51
Cadiz	fanega	3311	52,67
Calabria	comolo	3119	55,87
Calais	setier	10134	17,19
Campen	mudden	7137	24,41
Candia	carga	9356	18,62
Cassel	viertel	8702	20,02
Castille	fanega	3311	52,67
Cleves	malter	10939	15,93
Coburg	simmer	5079	34,31
Colberg	scheffel	3029	57,52
Cologne	malter	9883	17,63
Concarneau	tonneau	84200	2,07
Constantinople	kisloz	2140	81,40
Copenhagen	tœnde	8481	20,54
Corfu	moggio	6091	28,61
Corsica	stajo	6008	29,
Corunna	ferrado	986	176,71
Creutznach	malter	8874	19,63
Cyprus	medimno	4448	39,17
Dantzic	last	187310	,93
	scheffel Berlin measure	3315	52,26
Darmstadt	malter	6107	28,53
Delft	sack	6129	28,43
Denmark	tœnde	8481	20,54
Deventer	mudden	4938	35,29
Dieppe	raziere	6237	27,94
Dixmude	raziere	5828	29,90
Dordrecht	sack	7406	23,53
Dresden	scheffel	6455	27,
Dunkirk	sea raziere	9875	17,64
	land raziere	8887	19,61
Eckrenforde	tonnen	8242	21,14
Edam	mudden	6590	26,44
Elbing	last	187310	,93
Embden	tonnen	11656	14,95
Enchuysen	mudden	8080	21,56
England	quarter	17424	10,
	bushel	2178	80,
Erfurt	scheffel	3430	50,80
Femeren	scheffel	2294	75,95
Ferrara	staro	1843	94,54
Ferrol	ferrado	1104	157,83
Flensburg	tonnen	8355	20,85
Florence	stajo	1444	120,67
France	boisseau of Paris	774	225,13

CORN MEASURE.

Places.	Measures.	Contents of each measure — cubic in.	Equiv. to 10 quarters — num. 100
France (continued)	décalitre*	610	285,64
Francfort on the Maine	malter	6584	26,46
Frederickstadt	tonnen	7708	22,60
Gand	halster	3175	54,89
Geneva	coupe	4735	36,80
Genoa	mina	7110	24,51
Gluckstadt	tonnen	8716	20,
Goes	sack	4444	39,21
Gorcum	mudden	10305	16,91
Gouda	sack	6348	27,45
[illegible]	sack	5924	29,41
Gravelines	raziere	8080	21,56
Grypswald	scheffel	2375	73,36
Groningen	mudden	5386	32,35
Haarlem	sack	4678	37,25
Hamburgh	last	192720	,90⅜
	sack	12848	13,56
	scheffel	6424	27,12
	tonnen salt measure	11428	15,25
Hanau	malter	6862	25,39
Hanover	himten	1896	91,89
Harderwyck	mudden	5954	29,26
Harlingen	mudden	5386	32,35
Havre de Grace	boisseau	2108	82,66
Heidelberg	malter	6279	27,75
Heusden	mudden	10305	16,91
Hildesheim	himten	1581	110,23
Holstein	himten	2007	86,82
Honfleur	boisseau	2390	72,91
Horn	sack	4039	43,13
Husum	tonnen	8924	19,52
Kiel	tonnen	7227	24,11
Konigsberg	scheffel new measure	3315	52,26
Laland	tonnen	8380	20,79
Leghorn	sacco	4332	40,22
	stajo	1444	120,67
Leipsic	scheffel	8473	20,56
Lewarden	mudden	5386	32,35
Liebau	loof	3819	45,62
Libourne	sac	5079	34,31
Liege	setier	1825	95,48
Lisbon	moyo	49440	3,52
	alquier	824	211,46
Lisle	raziere	4334	40,20
London	quarter	17424	10,
Lubec	last corn measure	195500	,89⅛
	scheffel rye measure	2037	85,54
	scheffel malt measure	2375	73,36
	scheffel oats measure	2392	72,84
Lucca	stajo	1495	116,55
Lunenburg	scheffel	3793	45,94
Lyons	anée	12538	13,90
Madeira	alquier	683	255,11
Magdeburg	scheffel	3315	52,56
Majorca	quartera	4139	42,10
Malaga	fanega	3642	47,84
Malta	salma	16240	10,73
Manfredonia	carro	114634	1,52
Manhemia	malter	6279	27,75
Mantua	stajo	2124	82,04
Marans	tonneau	84200	2,07
Marseilles	charge	9636	18,08

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* The litre, or the unit of French measures of capacity, is therefore equivalent to 61 English cubic inches.

CORN MEASURE.

Places.	Measures.	Contents of each measure — cubic in.	Equiv. to 10 quarters — num.100
Mastrick	setier	1382	126,08
Meissen	scheffel	6455	27,
Memel	scheffel	3315	52,26
Middleburg	sack	4284	40,67
Milan	moggio	8436	20,66
Modena	stajo	4284	40,67
Montpellier	setier	3119	55,86
Montreuil	boisseau	520	335,08
Morlaix	boisseau	3229	53,96
Munich	schaff	22109	7,88
Muyden	mudden	8080	21,56
Nancy	carte	2921	59,65
Nantes	tonneau	152510	1,14¼
	setier	15251	11,42½
Naples	tomolo	3182	54,76
Narva	tonnen	9883	17,63
Neda in Galicia	ferrado	1104	157,83
Negropont	kisloz	1849	94,23
Nieuport	raziere	10157	17,15
Nimeguen	mouver	8173	21,32
Nice	stajo	2349	74,18
Nuremberg	summer	20287	8,59
Oesel	last	187260	,93
Oporto	alquier	1006	173,26
Osnaburg	scheffel	1750	99,57
Ostend	raziere	10706	16,27
Oudenwater	mudden	8465	20,58
Oviedo	fanega	4415	39,47
Paris	setier	9288	18,76
	boisseau	774	225,13
	decalitre	610	285,64
Passau	sechsling	19465	8,95
Patras	staro	5006	34,81
Pernau	loof	3974	43,85
Persia	artaba	3974	43,85
Piedmont	sack	6489	26,85
Poland	last	187260	,93
Prague	strick	5755	30,28
Purmerend	mudden	6590	26,44
Ratisbon	metzen	2001	87,08
Ravenna	rubbo	16984	10,26
Rendsburg	tonnen	7558	23,05
Revel	tonnen	7212	24,16
Riga	tonnen	7948	21,92
	loof	3974	43,85
Rimini	rubbo	16984	10,26
Rochelle	tonneau	84200	2,07
Romagna	staro	5506	31,64
Rome	rubbo	16684	10,44
Rostock	scheffel wheat measure	2450	71,12
	scheffel oats measure	2723	63,99
Rotterdam	hoed	67755	2,57
	sakken	6352	27,43
	achtendeelen	2117	82,31
Rouen	setier	10904	15,98
	boisseau	1363	127,83
Russia	chetwer	11888	14,66
	chetwerick	1486	117,25
St. Ander	fanega	3311	52,67
St. Gall	charge	4443	39,22
St. Malo	tonneau	84200	2,07
St, Omer	raziere	7900	22,07
St. Petersburgh	chetwer	11888	14,66
	chetwerick	1486	117,25

Corn Measure.

Places.	Measures.	Contents of each measure — cubic in.	Equiv. to 10 quarters — num. 100
St. Sebastian	fanega	3311	52,67
St. Valery	setier	9356	18,62
Sardinia	starello	2988	58,31
Schiedam	sack	6352	27,43
Schleswig	tonnen	8012	21,75
Schonhoven	mudden	8465	20,58
Scotland	firlot wheat measure	2197	79,31
	firlot barley measure	3207	54,33
Seville	fanega	3311	52,67
Sicily	salma grossa	20215	8,62
	salma generale	16229	10,74
Smyrna	quillot	2141	81,38
Spain	fanega	3311	52,67
	celemine	276	631,30
Stettin	scheffel	2677	65,09
Stralsund	scheffel wheat measure	2609	66,78
	scheffel oats measure	2768	62,95
Strasburg	sester city measure	1117	156,
	sester county measure	1152	151,25
Sweden	tunna	8932	19,51
	tunna wheat measure	10050	17,34
	tunna malt measure	10607	16,43
	tunna salt measure	9491	18,36
	kappe	279	624,53
	kanna	159½	1092,42
Tarascon	charge	3485	50,
Tarragona	setier	3442	50,62
Tervere	sack	4557	38,24
Tiel	mudden	8465	20,58
Tonningen	tonnen	7406	23 53
Tortosa	quartera	5414	32,18
Toulon	emine	6237	27,94
Tuscany	moggio	32480	5,368
Trieste	staro	4517	38.57
Tripoli	caffise	19920	8,75
Tunis	caffise	21830	7,98
Turin	emine	1168	149,18
Ulm	metzen	584	298,26
Utrecht	mudden	7110	24,50
Valencia	cahiz	12227	14,25
	barchilla	1019	171,
Valenciennes	mytur	4380	39,78
Vannes	tonneau	93556	1,86
Venice	staro	4941	35,27
Verona	minella	2248	77,51
Viana	alquier	989	176,18
Vienna	metzen	4277	40,74
Weimar	scheffel	5430	32,09
Wetzlar	malter	14275	12,20
Windaw	loof	3819	45,62
Wirtemburg	scheffel	3228	53,98
Wismar	scheffel	2496	69,81
Wolgast	scheffel	2609	66,78
Zante	bazzilo	2165	80,48
Zell	scheffel	18963	9,19
Ziriczee	sack	4741	36,75
Zuric	mutte	5043	34,55
Zwickau	scheffel	4089	42,61
Zwoll	sack	6836	25,49

The following examples will shew in what manner the proportion between the measures of any two given countries may be ascertained.

Examples.

It is required to reduce 100 alquiers of Lisbon into fanegas of Cadiz.

The alquier containing 824 cubic inches, and the fanega 3311, according to the table prefixed, I state the following equation:

100 alquiers = x
1 alquier = 824 cubic inches
3311 cubic inches = 1 fanega
Result 24,89 fanegas.

Reduce 100 fanegas of Cadiz into alquiers of Lisbon.

100 fanegas = x
1 fanega = 3311 cubic inches
824 cubic inches = 1 alquier
Result 401,82 alquiers.

TABLE, *which shews the quantity of English cubic inches contained by each of the measures used in the sale of liquids, and the relation of foreign measures to 100 English gallons wine measure.*

LIQUID MEASURE.

Places:	Measures.	Contents of each measure — cubic in.	Equiv. to 100 gallons — num. 100
Alicante	cantara	622	37,14
Altona	tonne of 32 stubgens	7067	3,27
Amsterdam	steken	1160	19,91
	virtel	442½	52,20
	stoopen	145	159,31
	mingel	72½	318,62
Ancona	boccale	87	265,51
Antwerp	stoopen	192¼	120,15
Arragon	cantara	585	39,49
Augsburg	maas	90⅓	255,72
Barcelona	carga wine measure	7599	3,04
	carga oil measure	7394	3,12
Bari	salm oil measure	10086	2,29
Basil	pot new measure	76⅕	303,15
Berlin	nass or maas	70⅛	329,41
Bern	maas	100½	229,85
Bologna	corbal	4450	5,13
Bordeaux	velte	453	51,
Bremen	stubgen	193½	119,38
Breslaw	quart	42⅓	545,07
Brunswick	stubgen	223¾	103,24
Cadiz	*see Spain*		
Canary Islands	pipa	26794	,86
Canea	miscala oil measure	686	33,67
Cassel	viertel	499½	46,25
Cognac	velte	447½	51,62
Cologne	viertel	365	63,29
Constantinople	almud	319¼	72,36
Dantzic	stof wine measure	104⅗	220,84
	stof beer measure	140¼	164,70
Denmark	ahm	9128	2,53
	kanne wine measure	117¾	196,18
	tœnde beer measure	8011	2,88
	tœnde pitch measure	7067	3,27
Dijon	quartaut	6176	3,74
Dresden	anker regular measure	2055	11,24
	tonne beer measure	5993	3,85
	kanen great measure	85⅝	269,79
	kanen small measure	57	405,27
Dunkirk	pot	138	167,39
England	gallon wine measure	231	100,
	gallon beer measure	282	81,91
Ferrara	secchia	624	37,02
Florence	barile oil measure	1940	11,91
	barile wine measure	2425	953
	fiascho	121	190,90
	boccale	60½	381,80
France	hectolitre	6100	3,79

Liquid Measure.

Places.	Measures.	Contents of each measure — cubic in.	Equiv. to 100 gallons — num. 100
France (continued)	litre	61	378,69
Francfort on the Maine	viertel	450	51,33
Gallipoli	salma	9392	2,46
Geneva	pot	58	398,27
Genoa	rubbo oil measure	521	44,34
	pinta wine measure	105	220,
Gotha	stubgen	206¾	111,73
Hamburgh	viertel	442	52,26
	stubgen	221	104,52
	kanne	110½	209,05
	tonne beer measure	10594	2,18
	tonne fish oil measure	7062	3,27
Hanover	stubgen	237	97,47
	tonne beer measure	6163	3,75
	tonne honey measure	6044	3,82
Heidelberg	viertel	562¼	41,08
Hungaria	eimer	4470	5,17
Königsberg	stof	87½	264,
Leghorn	barile oil measure	1940	11,91
	barile wine measure	2425	9,53
	fiascho	121	190,90
	boccale	60½	381,80
Leipsic	eimer	4625	5,00
	kanne	73⅖	314,71
Lisle	lot	128	180,47
Lisbon	almude	1040	22,21
	alquier	520	44,42
	canhada	86⅔	266,54
Lubec	stubgen	220¾	104,65
Lucca	copa oil measure	6088	3,79
Lyons	pot	58 1/10	397,62
Majorca	cortan oil measure	251⅝	91,80
Malaga	arroba	947	24,39
Mantua	moggio oil measure	6789	3,40
Marseilles	millerolle	3640	6,35
	scandal	910	25,38
Massa	barile oil measure	2160	10,69
Mentz	maass	113¾	203,08
Messina	salma wine measure	5270	4,38
	caffise oil measure	527	43,83
Minorca	quartillo	349½	66,09
Montpellier	pot wine measure	64⅛	360,23
	pot oil measure	71⅜	323,64
Naples	stara oil measure	3407	6,78
	barile wine measure	2541	9,09
Narva	stof	78⅗	293,90
Nice	rubbo oil measure	515	44,85
North	barrel pitch measure	7067	3,27
Nuremberg	maas tavern measure	60½	381,81
Oneglia	barile oil measure	3783	6,11
Oporto	aliquer	675¾	34,18
	canhade	112⅝	205,10
Osnaburg	kanne	74⅜	310,58
Ovieda	quartillo	34½	669,56
Paris	setier	464⅘	49,70
	pinte	58 1/10	397,62
	litre new measure	61	378,69
Pernau	stof	78⅗	293,90
Pola	salma	9196	2,51
Prague	pint	116	199,14
Puglia	staja	940	24,57
Ratisbon	viertel	216½	106,70
Revel	stof	72½	318,62
Riga	stof	75	308,

LIQUID MEASURE.

Places.	Measures.	Contents of each measure — cubic in.	Equiv. to 100 gallons — num. 100
Rochelle	velt	447½	51,62
Rome	boccale	79⅘	289,47
Rotterdam	stoopen	156	148,08
Russia	wedra	751	30,76
	kruska	93⅞	246,07
Saragossa	cantara	584	39,55
Schafhausen	maas	79⅘	289,47
Scotland	pint old measure	103⅖	223,40
Sicily	caffise	695	33,24
Spain	moyo wine measure	15152	1,52
	cantara ditto	947	24,39
	azumbre ditto	118⅜	195,14
	quartillo ditto	29⅗	780,40
	arroba oil measure	740	31,22
	quartilla ditto	185	124,86
	libra ditto	29⅗	780,40
Stettin	nœssel	44¾	516,20
Stralsund	stubgen	237	97,47
Strasburg	schoppen	29⅗	780,40
Sweden	kanna	159⅝	144,71
Toulon	millerolle	3927	5,88
Trieste	orna oil measure	4003	5,77
	barile wine measure	4158	5,56
Tripoli	mataro	1375	16,80
Tunis	mataro oil measure	1155	20,
	mataro wine measure	577½	40,
Turin	pint	95½	241,88
Valencia	cantara	775⅝	29,78
Venice	miro oil measure	962	24,
	secchia wine measure	602¼	38,36
Verona	basso	275¾	83,77
Vienna	eimer	3614	6,39
	maas	90⅓	255,72
Zell	stubgen	237	97,47
Zurich	maas	111¼	207,64

The following examples will shew in what manner the proportion between the liquid measures of any two given countries may be ascertained.

Examples.

Let it be required to reduce 100 litres new French measure into Spanish quartillos wine measure.

The French litre measuring internally 61 English cubic inches, and the Spanish quartillo 29 3-5, according to the table prefixed, I state the following equation:

100 litres = x
1 litre = 61 cubic inches
29 3-5 cubic inches = 1 quartillo
Result 206,08 quartillos.

Reduce 100 quartillos wine measure of Spain into litres new measure of France.

100 quartillos = x
1 quartillo = 29 3-5 cubic inches
61 cubic inches = 1 litre
Result 48,52 litres.

TABLE, *which shews the length in English lines of each of the measures used in the sale of cloths, linens, and silk stuffs, and the relation of foreign measures to 100 yards and 100 ells English measure.*

CLOTH MEASURE.

Places.	Measures.	Length of each measure — lines 100.	Equiv. to 100 yards — num. 100	Equiv. to 100 ells — num. 100
Abbeville	aune	558,25	77,38	96,73
Aix la Chapelle	elle	315,35	137,	171,25
Aleppo	pike	319,40	135,25	169,06
Alexandria	pike	319,60	135,17	168,96
Algiers	pike long measure	294,05	146,91	183,64
	pike short measure	220,53	195,89	244,86
Alicante	vara	399,20	108,22	135,27
Altona	elle	270,60	159,64	199,50
	elle Brabant measure	326,54	132,30	165,37
Amberg	elle	394,40	109,58	136,91
Amsterdam	elle	326,	132,51	165,64
Ancona	braccio	303,40	142,38	177,98
Anspach	elle	289,80	149,07	186,34
Antwerp	aune long measure	327,90	131,75	164,69
	aune short measure	323,25	133,64	167,05
Archangel	archine	336,	128,57	160,71
Arragon	vara	364,13	118,64	148,30
Arras	aune	329,65	131,05	163,81
Augsburg	elle long measure	287,85	150,08	187,60
	elle short measure	279,75	154,42	193,02
Avigon	canne	918,80	47,02	58,77
	aune	551,20	78,37	97,96
Basil	aune	556,80	77,58	96,98
Bamberg	elle	344,65	125,35	156,69
Barcelona	cana	727,45	59,39	74,23
Bayreuth	elle	283,60	152,33	190,41
Batavia	covid	237,60	181,82	227,27
Bautzen	elle	272,	158,82	198,53
Bayonne	aune	417,40	103,50	129,38
Bengal	covid	108,	400,	500,
Bergamo	braccio	309,50	139,58	174,47
Bergen	elle	296,45	145,72	182,15
Berg-op-Zoom	elle	327,07	132,08	165,10
Berlin	elle	314,90	137,19	171,48
Bern	elle	255,80	168,89	211,10
Bielefeld	elle	276,25	156,38	195,47
Bilboa	vara	395,25	109,30	136,62
Bologne	braccio for silk stuffs	281,25	153,60	192,
	braccio for cloths	299,90	144,05	180,06
Bolzano	elle	373,20	115,75	144,69
	braccio	259,60	166,40	208,
Bombay	cuz	336,	128,57	160,71
	heat	216,	200,	250,
Bordeaux	aune	562,51	76,80	96,
Brabant	aune	326,54	132,30	165,37
Breda	elle	327,07	132,08	165,10
Bremen	elle	273,15	158,15	197,69
Brescia	braccio	221,06	195,42	244,28
Breslaw	elle	259,65	166,38	207,97
	elle Silesia measure	272,	158,82	198,53
Bretagne	aune	636,25	67,90	84,87
Bruges	aune	327,90	131,75	164,69
	aune for lineas	342,40	126,17	157,71
Brunswick	elle	269,55	160,27	200,33
Brussels	aune long measure	327,90	131,75	164,69
	aune short measure	323,25	133,64	167,05
Burgos	vara	395,25	109,30	136,62
Cadiz	vara	395,25	109,30	136,62
	ana Brabant measure	327,90	131,75	164,69
Caën	aune	558,25	77,38	96,73

CLOTH MEASURE.

Places.	Measures.	Length of each measure — lines 100	Equiv. to 100 yards — num. 100	Equiv. to 100 ells — num. 100
Cagliari	raso	259,20	166,66	208,33
Cairo	pike	319,60	135,17	168,96
Calais	aune	558,25	77,38	96,73
Calicut	covid	216,	200,	250,
	guz	338.40	127,66	159,57
Cambrai	aune	338,35	127,68	159,60
Canary Islands	vara	406,20	106,35	132,94
Candia	pike	301,	143,52	179,40
Canton	covid	175,50	246,15	307,70
Carthagena	vara	395,25	109,30	136,62
Cassel	elle	265,	163,	203,75
Castille	vara	395,25	109,30	136,62
Chambery	raso	271,35	159,20	199,
China	covid	175.50	246,15	307,70
Christiania	elle	296,45	145,72	182,15
Coblentz	elle	263,55	163,91	204,84
Coburg	elle	276,90	156,	195,
Cologne	elle long measure	328,15	131,65	164,56
	elle short measure	271,15	159,32	199,15
Constance	elle long measure	351,05	123,06	153,82
	elle short measure	326,33	132,38	165,48
Constantinople	pike long measure	316,	136,70	170,88
	pike short measure	306,	141,18	176,47
Copenhagen	alen	296,45	145,72	182,15
Corfu	pike	271,	159,41	199,26
Corsica	palmo	118,15	365,64	457,05
Cracow	elle	291,40	148,25	185,32
Cremona	braccio	290,50	148,70	185,93
Cyprus	pike	317,15	136,21	170,26
Damascus	pike	274,85	157,17	196,47
Dantzic	elle	271,	159,41	199,26
Delft	elle	326,	132,51	165,64
Denmark	alen	296,45	145,72	182,15
Dresden	elle	267,30	161,61	202,02
Dublin	yard	432,	100,	125,
	ell	540,	80,	100,
Dunkirk	aune	319,40	135,25	169,06
Dusseldorf	elle	254,80	169,54	211,93
Elbing	elle	266,88	161,87	202,34
Embden	elle	316,60	136,45	170,56
England	yard	432,	100,	125,
	elle	540,	80,	100,
Erfurt	elle long measure	259,60	166,40	208,
	elle short measure	190,70	226,53	283,17
Erlang	elle	311,50	138,62	173,35
Fermo	braccio	310,	139,35	174,20
Ferrara	braccio for cloths	316,	136,70	170,88
	braccio for silk stuffs	297,	145,45	181,82
Flensburg	elle	270,60	159,64	199,50
Florence	braccio for cloths	278,90	154,90	193,62
	braccio for silk stuffs	274,85	157,17	196,47
Forli	braccio	290,50	148,70	185,93
France	aune of 528 lines	562,51	76,80	96,
	metre	472,27	91,47	114,34
Francfort on the Maine	elle	254,80	169,54	211,93
	elle Brabant measure	326,54	132,30	165,37
	aune of Paris	561,27	76,97	96,21
Francfort on the Oder	elle	313,33	137,87	172,34
Freyberg	elle	267,60	161,43	201,79
Gand	aune	327,90	131,75	164,69
	aune for linens	342,40	126,17	157,71
Geneva	aune	540,13	79,98	99,97
	aune of France	562,51	76,80	96,
Genoa	canna of 10 1-2 palmi	1245,10	34,70	43,37

CLOTH MEASURE.

Places.	Measures.	Length of each measure — lines 100	Equiv. to 100 yards — num. 100	Equiv. to 100 ells — num. 100
Genoa (continued)	canna of 10 palmi	1185,80	36,43	45,54
	canna of 9 palmi	1067,20	40,48	50,60
	braccio	270,70	156,13	195,16
	palmo	118,58	364,32	455,40
Gibraltar	vara	395,25	109,30	136,62
Glatz	elle	276,80	156,07	195,08
Gombroon	gueze	464,52	93,	116,25
Gorlitz	elle	266,25	169,90	212,37
Gottenburg	alle	280,40	154,06	192,58
Gottingen	elle	274,85	157,17	196,47
Guastalla	braccio	321,85	134,22	167,78
Gueldres	elle	313,22	137,92	172,40
Guinea	jactam	1728,	25,	31,25
Halle	elle long measure	314,90	137,19	171,48
	elle short measure	269,75	160,15	200,18
Hamburgh	elle	270,60	159,64	199,50
	elle Brabant measure	326,54	132,30	165,37
Hanover	elle	274,85	157,17	196,47
Harburg	elle	274,85	157,17	196,47
Harlem	elle	343,70	125,69	157,11
Havre de Grace	aune	558,25	77,38	96,73
Hague	elle	326,	132,51	165,64
Heidelberg	elle	394,25	109,57	136,97
Hildesheim	elle	264,53	163,30	204,13
Hirchsberg	elle	272,	158,82	198,53
Hoff	elle	301,	143,52	179,40
Jagerndorf	elle	268,50	160,90	201,12
Japan	inck	897,60	48,13	60,16
Java	covid	237,60	181,82	227,27
Jerusalem	pike	324,	133,33	166,67
Ingolstadt	elle	376,07	114,87	143,59
Inspruck	elle	371,30	116,35	145,23
Kiel	elle	271,70	159,	198,75
Kintzingen	elle	281,60	153,41	191,76
Konigsberg	elle	314,90	137,19	171,48
Krems	elle	353,25	122,29	152,87
Lauban	elle	266,25	169,90	212,37
Leghorn	canna for cloths	1115,60	38,72	48,40
	braccio	278,90	154,90	193,62
	palmo	139,45	309,80	387,24
	canna for silk stuffs	1099,40	39,29	49,12
	braccio	274,85	157,17	196,47
	palmo	137,42	314,34	392,94
Leipsic	elle	267,	161,80	202,25
Leutkirch	elle	331,87	130,17	162,72
Leyden	elle	322,60	133,91	167,39
Liebau	elle	267,	161,80	202,25
Liege	elle	260,50	165,84	207,30
Lisbon	vara	517,80	83,43	104,29
	covado	319,85	135,06	168,83
	palmo craveiro	106,62	405,17	506,47
	palmo menor	103,56	417,15	521,44
Lisle	aune	332,40	129,96	162,45
London	yard	432,	100,	125,
	ell	540,	80,	100,
Louvain	aune long measure	327,90	131,75	164,69
	aune short measure	323,25	133,64	167,05
Lubec	elle	272,50	158,52	198,16
Lucca	braccio for cloths	285,84	151,13	188,92
	braccio for silk stuffs	273,25	158,10	197,62
Lunenburg	elle	274,85	157,17	196,47
Lyons	aune	552,70	78,16	97,70
Madeira	vara	517,80	83,43	104,29
Madras	covid	216,	200,	250,

Cloth Measure.

Places.	Measures.	Length of each measure — lines 100	Equiv. to 100 yards — num. 100	Equiv. to 100 ells — num. 100
Madrid	vara	395,25	109,30	136,62
Magdeburg	elle	314,90	137,19	171,48
Mahon	cana	756,	57,14	71,43
Majorca	cana	810,	53,33	66,66
Malaga	vara	395,25	109,30	136,62
Malines	aune	323,25	133,64	167,05
Malta	canna	1058,40	40,82	51,02
Manheim	elle	263,48	163,98	204,97
Mantua	braccio	219,70	196,63	245,79
Marseilles	canne	948,20	45,56	56,95
	aune	552,60	78,18	97,72
Mastriok	elle	322,80	133,83	167,28
Mecca	covid	324,	133,33	166,66
Memel	elle	271,	159,41	199,25
Memmingen	elle	331,33	130,38	162,98
Mentz	elle	259,20	166,66	208,33
Messina	canna	918,72	47,02	58,77
	palme	114,84	376,18	470,22
Middelburg	elle	326,	132,51	165,64
Milan	braccio for cloths	319,40	135,25	169,06
	braccio for silk stuffs	253,34	170,52	213,15
Minden	elle	273,40	158,	197,50
Minorca	cana	756,	57,14	71,43
Mocha	guz	300,	144,	180,
	covid	216,	200,	250,
Modena	braccio	302,35	142,88	178,60
Montpellier	cannè	946,	45,66	57,08
Morea	pike	216,	200,	250,
Morlaix	aune	636,25	67,90	84,87
Morocco	covado	238,10	181,44	226,80
Munich	elle	394,30	109,56	136,95
Munster	elle	381,80	113,15	141,48
Munden	elle	276,15	156,44	195,55
Namur	elle	313,22	137,92	172,40
Nantes	aune of Bretagne	636,25	67,90	84,87
Naples	canna	996,32	43,36	54,20
	palmo	124,54	346,88	433,60
Narva	elle	279,66	154,47	193,09
	archine	336,	128,57	160,71
Naumburg	elle	267,	161,80	202,25
Negropont	pike	291,	148,45	185,57
Neufchatel	elle	525,45	82,22	102,77
Nice	raso	259,20	166,66	208,33
	palmo	124,65	346,57	433,21
Nienburg	elle	274,85	157,17	196,47
Nimeguen	elle	313,22	137,92	172,40
Nordlingen	elle	288,40	149,80	187,24
Norway	elle	296,45	145,72	182,15
Nuremberg	elle	311,50	138,68	173,35
Oporto	vara	517,80	83,43	104,29
	covado	313,62	137,75	172,18
	palmo craveiro	104,54	413,25	516,54
	palmo menor	103,56	417,50	521,44
Oran	vara	395,25	109,30	136,62
	pike for cloths	324,	133,33	166,66
Osnabruck	elle	275,50	156,80	196,
	elle for linens	284,20	152,	190,
Ostend	aune	330,25	130,81	163,51
Osterode	elle	274,85	157,17	196,47
Oudenard	elle	315,35	137,	171,25
Oviedo	vara	407,50	106,02	132,52
Paderborn	elle	254,80	169,54	211,93
Padua	braccio	316,75	136,38	170,48
Palermo	canna	918,72	47,02	58,77

CLOTH MEASURE.

Places.	Measures.	Length of each measure — lines 100.	Equiv. to 100 yards — num. 100	Equiv. to 100 ells — num. 100
Palermo (continued)	palmo	114,84	376,18	470,22
Paris	aune of 528 lines	562,51	76,80	96,
	aune of 526 5-6 lines	561,27	76,97	96,21
	aune of 524 lines	558,25	77,38	96,73
	metre	472,27	91,47	114,34
Parma	braccio	258,15	167,35	209,18
Patras	pike for cloths and linens	324,	133,33	166,66
	pike for silk stuffs	300,	144,	180,
Pekin	peking	168,33	256,64	320,80
Pernau	elle	259,10	166,73	208,41
Persia	gueze	297,50	145,21	181,52
	gueze monkelse	446,40	96,77	120,97
Perugia	braccio	305,34	141,48	176,85
Piedmont	raso	281,25	153,60	192,
Pisa	palmo	140,95	306,50	383,12
Placentia	braccio	306,30	141,04	176,30
Poland	elle	291,40	148,25	185,32
Pondicherry	covid	216,	200,	250,
Pontremoli	braccio	326,10	132,47	165,59
Posen	elle	269,	160,59	200,74
Prague	elle	279,	154,84	193,55
Presburg	elle	263,60	163,89	204,86
Queda	covid	216,	200,	250,
Ragusa	ana	242,40	178,22	222,78
Ratisbon	elle	383,	112,80	141,
Ratzeburg	elle	274,85	157,17	196,47
Ravenna	braccio	317,50	136,06	170,08
Ravensburg	elle	324,60	133,08	166,36
Reccanati	braccio	314,20	137,50	171,87
Reggio	braccio	250,20	172,66	215,82
Revel	elle	252,80	170,88	213,60
Rhodes	pike	357,	121,	151,25
Riga	elle	258,90	166,86	208,57
Rimini	braccio	302,35	142,88	178,60
Rochelle	aune	558,25	77,38	96,73
Rome	canna for linens	987,	43,77	54,71
	braccio ditto	299,80	144,10	180,12
	canna for cloths and silk stuffs	939,66	45,97	57,47
	braccio	400,50	107,86	134,83
Rostock	elle	273,15	158,15	197,69
Rotenburg	elle	276,90	156,	195,
Rotterdam	elle	326,	132,51	165,64
Rouen	aune for cloths	549,75	78,58	98,23
	aune for linens	659,68	65,49	81,86
Roveredo	braccio for cloths	299,90	144,05	180,06
	braccio for silk stuffs	351,80	122,80	153,56
Ruremonde	elle	324,	133,33	166,66
Russia	archine	336,	128,57	160,71
Saltzburg	elle for silk stuffs	379,15	113,94	142,42
	elle for cloths	474,95	90,96	113,70
Sayd	pike	285,50	151,31	189,14
St. Gall	elle for cloths	291,	148,45	185,57
	elle for linens	378,30	114,20	142,75
St. Malo	aune	636,25	67,90	84,87
St. Petersburg	archine	336,	128,57	160,71
St. Sebastian	vara	395,25	109,30	136,62
Saragossa	cana	978,40	44,15	55,19
Sardinia	raso	259,20	166,66	208,33
	palmo	118,58	364,32	455,40
Schafhausen	elle	285,	151,58	189,47
Schweinfurt	elle	275,50	156,80	196,
Scio	pike long measure	324,	133,33	166,66
	pike short measure	311,80	138,55	173,19
Scotland	ell old measure	446,40	96,77	120,96

CLOTH MEASURE.

Places.	Measures.	Length of each measure — lines 100.	Equiv. to 100 yards — num. 100	Equiv. to 100 ells — num. 100
Seville	vara	395,25	109,30	136,62
Siam	ken	453,85	95,18	118,98
	covid	216,	200,	250,
Sicily	canna	918,72	47,02	58,77
	palmo	114,84	376,18	470,22
Sienna	braccio for linens	283,50	152,38	190,48
	braccio for cloths	178,35	242,22	302,78
Silesia	elle	272,	158,82	198,53
Smyrna	pike	324,	133,33	166,66
Soleure	elle	259,60	166,40	208,
Spain	vara	295,25	109,30	136,62
Stade	elle	274,85	157,17	196,47
Stettin	elle	307,36	140,55	175,69
Stockholm	elle	280,40	154,06	192,58
Stralsund	elle	274,85	157,17	196,47
Strasburg	elle	562,51	76,80	96,
	brache	254,60	169,68	212,10
Surat	guz	336,	128,57	160,71
	cobit	216,	200,	250,
Sweden	elle	280,40	154,06	192,58
Teneriff	vara	395,25	109,30	136,62
Thorn	elle	269,	160,59	200,74
Toledo	vara	395,25	109,30	136,62
Tortosa	cana	751,75	57,46	71,83
Toulon	canne	915,80	47,17	58,96
Toulouse	canne	859,75	50,25	62,81
Tournai	aune	292,45	147,72	184,65
Trente	elle for cloths	319,60	135,17	168,96
	elle for silk stuffs	289,	149,48	186,85
Treves	elle	263,60	163,89	204,86
Trevigo	braccio	316,75	136,38	170,48
Trieste	elle for cloths	319,20	135,34	169,17
	elle for silk stuffs	302,55	142,78	178,48
Tripoli in Barbary	pike	260,90	165,58	206,98
Tripoli in Syria	pike	324,	133,33	166,66
Troppau	elle	268,50	160,90	201,12
Troyes	aune	374,70	115,29	144,12
Tunis	pike for cloths	317,80	135,93	169,92
	pike for silk stuffs	297,93	145,	181,25
	pike for linens	223,40	193,38	241,72
Turkey	pike long measure	316,	136,70	170,88
	pike short measure	306,	141,18	176,47
Turin	raso	284,90	151,63	189,54
Ulm	elle	268,50	160,90	201,12
Valencia	vara	428,20	100,88	126,10
Valenciennes	aune	311,10	138,86	173,58
Venice	braccio for cloths	314,90	137,19	171,48
	braccio for silk stuffs	296,40	145,75	182,18
Verden	elle	274,85	157,17	196,47
Verona	braccio	296,40	145,75	182,18
Vicenza	braccio	323,45	133,56	166,95
Vienna	elle	367,	117,71	147,14
Waldenburg	elle	272,	158,82	198,53
Warendorf	elle	276,25	156,38	195,47
Warsaw	elle	291,40	148,25	185,32
Windesheim	elle	311,50	138,68	173,35
Wirtemburg	elle	318,	135,85	169,81
Wismar	elle	275,30	156,92	196,15
Wurtzburg	elle	274,10	157,60	197,
Xativa	vara	420,50	102,73	128,42
Ypres	aune	330,25	130,81	163,51
Zell	elle	274,85	157,17	196,47
Zittau	elle	269,10	160,54	200,67
Zurich	elle	283,40	152,43	190,[illegible]

The following examples will ſhew in what manner the proportion between the measures of any two given countries may be ascertained.

Examples.

Let it be required to reduce 100 archines of Russia into varas of Spain.

The archine measuring 336 English lines, and the vara 395,25, according to the table prefixed, I state the following equation:

100 archines = x
1 archine = 336 lines
395,25 lines = 1 vara
Result 85,01 varas.

Reduce 100 varas into archines.

100 varas = x
1 vara = 395,25 lines
336 lines = 1 archine
Result 117,63 archines.

English *Long* MEASURE.

inch											
3	palm										
9	3	span									
12	4	1⅓	foot								
18	6	2	1½	cubit							
36	12	4	3	2	yard						
45	15	5	3¾	2½	1¼	ell					
60	20	6 2-3	5	3⅓	1⅔	1⅓	pace				
72	24	8	6	4	2	1⅗	1 1-5	fathom			
198	66	22	16½	11	5½	4	3 1-10	2¾	pole		
7920	2640	880	660	440	220	176	132	110	40	fur-long	
63360	21120	7040	5280	3520	1760	1408	1056	880	320	8	mile

Jewish *Long or Itinerary* MEASURE.

						Eng. miles.	paces.	feet. dec.
cubic						0	0	1.824
400	stadium					0	145	4.6
2000	5	Sab. day's journey				0	729	3.0
4000	10	2	eastern mile			1	403	1.0
12000	30	6	3	parasang		4	153	3.0
96000	240	48	24	8	a day's journey	33	172	4.0

Roman *long* MEASURE, *deduced to* English.

										Eng. paces.	ft.	dec. inch.
digitus transversus										0	0	0.725¼
1⅓	uncia									0	0	0.967
4	3	palmus minor								0	0	2.901
16	12	4	pes							0	0	11.604
20	15	5	1¼	palmipes						0	1	2.505
24	18	6	1½	1 1-5	cubitus					0	1	5.406
40	30	10	2½	2	1⅔	gradus				0	1	5.01
80	60	20	5	4	3⅓	2	passus			0	4	10.02
10000	7500	2500	625	500	416⅔	250	215	stadium		120	4	4.5
80000	60000	20000	5000	4000	3333⅓	2000	1000	8	milliare	967	0	0

English square or superficial MEASURES, are raised from the yard of 36 inches multiplied into itself; and this producing 1296 square inches in the square yard, the divisions of this are square feet and inches, and the multipliers, poles, roods, and acres,

English square MEASURE.

inches						
144	feet					
1296	9	yards				
3600	25	2	paces			
39204	272¼	30¼	10,89	poles		
1568160	10890	1210	435,6	40	roods	
6272640	43560	4840	1743,6	160	4	acres

Long Measure.

12 Inches	make	1 Foot.
3 Feet	—	1 Yard.
5½ Yards	—	1 Pole, or perch.
40 Poles	—	1 Furlong.
8 Furlongs	—	1 Mile.
4 Inches	—	1 Hand.
6 Feet	—	1 Fathom, or toise.
3 Miles	—	1 League.
60 Nautical, or geographical miles, or 69½ statute miles.	—	1 Degree.

Square Measure.

144 Square inches	make	1 Square foot.
9 Square feet	—	1 Square yard.
30¼ Square yards	—	1 Square pole.
40 Square poles	—	1 Square rood.
4 Square roods	—	1 Square acre.

Solid, or Cubic Measure.

1728 Cubic in.	make	1 Cubic foot.
27 Cubic feet	—	1 Cubic yard.
231 Cubic in.	—	1 Gal. wine measure.
281 do.	—	1 Gal. beer measure.
168 3-5 do.	—	1 Gal. dry measure.

Dry Measure.

8 Pints	make	1 Gallon.
2 Gallons	—	1 Peck.
4 Pecks	—	1 Bushel.
4 Bushels	—	1 Coom.
2 Cooms	—	1 Quarter.
5 Quarters	—	1 Wey.
2 Weys	—	1 Last.

Avoirdupois Weight.

16 Drams	make	1 Ounce.
16 Ounces	—	1 Pound.
28 Pounds	—	¼ of a Hundred.
4 Quarters	—	1 Hundred
20 Hundred	—	1 Ton.
14 Pounds	—	1 Stone.

French square MEASURES, are regulated by 12 square lines in the inch square, 12 inches in the foot, 22 feet in the perch, and 100 perches in the arpent or acre.

French liquid MEASURES. At Paris, and in a great part of the kingdom, the smallest measure is the possou, which contains six cubic inches; 2 possous make the demi-septier; 2 demi-septiers the chopine; 2 chopines a pint; 2 pints a quart or pot; 4 quarts the gallon, or septier of estimation; 36 septiers the muid; which is subdivided into 2 demi-muids, 4 quarter muids, and 8 half quarter muids. The queue in Orleans, Blois, &c. contains a Paris muid and a half. The tun used at Bayonne and Bourdeaux, consists of 4 bariques, and equal to 3 Paris muids; at Orleans to 2: so that the first tun contains 864 pint, and the second 576. The demi-queue in Champagne, 96 quarts; the pipe in Anjou and Poictou, 2 bussards, equal to 2 demi-queues of Orleans, &c. or a muid and a half of Paris. The millerolle used in Provence, contains 66 Paris pints; and the poincon at Nantz, in Touraine, and the Blessois, equal to half the Orleans tun. The poincou at Paris is the same with the demi-queue.

French Weights and Measures:

The toise is commonly used in France for military purposes, and is divided into 6 feet: each foot 12 inches; each inch 12 lines; each line 12 points. The pace is usually reckoned at 2 1-2 feet.

Poids de Marc, ou de Paris.

24 Grains	make	1 Den'r.
3 Den'rs.	—	1 Gros.
8 Gros	—	1 Ounce.
8 Ounces	—	1 Marc.
2 Marcs	—	1 Pound.

The French have lately formed an entire new system of weights and measures: the following short account of them, and their proportion to the old weights and measures of France, and those of English standard, is extracted from *Nicholson's Natural Philosophy*,

Proportions of the measures of each species to its principal measure or unity.	First part of the name which indicates the proportion to the principal measure or unity.	PRINCIPAL MEASURES, OR UNITIES,				
		Length.	Capacity.	Weight.	Agrarian.	For Firewood.
10,000 1,000 100 10 0 0.1 0.01 0.001	Myria Kilo Hecto Deca Deci Centi Milli	Metre.	Litre.	Gramme.	Are.	Stere.
Proportion of the principal measures between themselves, and the length of the Meridian.		10,000,000th part of the dist. from the Pole to the Equator	A Decimetre cube	Weight of a centimetre cube of distilled Water	100 square metres	One cubic metre
Value of the principal measures in the ancient French measures		3 feet 11 lines and ½ nearly.	1 pint and 1-20 or 1 litron and ¼ nearly	18 grains and 841,000 parts	Two square perches des eaux et foret	1 demi voie or ¼ of a cord des eaux et foret.
Value in English measures.		Inches 39·383.	61.083 inch. which is more than the wine and less than the beer quart.	22·966 grains.	11·968 square yards.	

By the new metrical system of the French, the geometrical circle used in astronomical, geographical, and topographical calculations, is divided instead of 360, into 400 equal parts, which are called *grades*: each grade is divided into 100 equal parts which are called *minutes* of *grades*: and each minute into 100 *seconds*, of *grades*. The proportion of the new to the old degree is 0.9; and the next proportion or minute is 54′ of the old division; and the new second is 32″ .4 of the ancient.

Reduction of the old French Weights and measures to English; and the contrary.

1st. To reduce English Avoirdupois to Paris weight:

The avoirdupois pound of 16 ounces, or 7000 troy grains	= 8538	Paris grains
The ounce	= 533.6250	

2d. To reduce Paris running feet or inches into English, multiply by —— English running feet or inches into Paris divide by	1.065977
3d. To reduce Paris cubic feet or inches into English, multiply by —— English cubic feet or inches into Paris, divide by	1.211278
4th. To reduce the Paris pint to the English, multiply by —— To reduce the English pint to the Paris, divide by	2.0171082

German MEASURES. The Rhinland rood is the measure commonly used in Germany and Holland, and in most of the northern states, for all military purposes. It is divided into 12 feet. The Rhinland rood is sometimes divided into tenths, or decimal feet, and the pace is made equal to 2 decimal feet, or 2-10 of a rood.

Proportions between the English Weights and Measures, and those of the principal Places in Europe.

Places.	Foot in Parts.	Pound in Parts.
London	1000	100
Paris	1068	108
Amsterdam	942	93
Rhinland	1033	96
Antwerp	946	98
Lovaine	958	98
Middleburgh	991	98
Strasburgh	920	93
Bremen	964	94
Cologne	954	97
Frankfort	948	93
Leipsig	—	117
Hamburg	—	95
Venice	1153	151
Prague	1026	106
Copenhagen	965	94
Nuremburgh	1006	94

Proportions between the English Weights and Measures, and those of the principal places in Europe.

(Continued.)

Places.	Foot in Parts.	Pound in Parts.
Bavaria	954	40
Vienna	1053	83
Madrid	1001	99
Toledo	899	100
Bologne	1204	127
Naples	861	—
Florence	—	123
Genoa	—	142
Mantua	1569	143
Turin	1062	—
Dantzig	944	119

Cubical MEASURES, or measures of capacity for liquors. English liquid measures were originally raised from troy weight, it being ordained that pounds troy of wheat, gathered from the middle of the ear, and well dried, should weigh a gallon of wine measure; yet a new weight, viz. the avoirdupois weight, had been introduced, to which a second standard gallon was adjusted, exceeding the former in the proportion of the avoirdupois weight to the troy weight. From this latter standard were raised two measures, the one for ale, the other for beer.

The sealed gallon at Guildhall, London, which is the English standard for wine, spirits, oil, &c. is supposed to contain 231 cubic inches; yet by actual experiment made in 1688, before the lord mayor and commissioners of excise, it only contains 224 cubic inches. It was however agreed to continue the common supposed contents of 231: hence, as 12 : 231 :: $14\frac{12}{20}$: 281 1-2 the cubic inches in an ale gallon; but in effect, the ale quart contains 70 1-2 cubic inches; on which principles the ale and beer gallon will be 282 cubic inches.

Dry MEASURE, is different from both the ale and wine measure, being nearly a mean between both.

According to a British act of parliament, passed in 1697, every round bushel with a plain and even bottom, being 18 1-2 inches throughout, and eight inches deep, is to be accounted a legal Winchester bushel, according to the standard in the exchequer; consequently a corn gallon will contain 268.8 inches, as in the following table.

inches				
2688	gallons			
5376	2	pecks		
21504	8	4½	bushels	
172032	64	32	8	quarters

Winchester Measure.

2 Pints	make	1 Quart.
4 Quarts	——	1 Gallon.
9 Gallons	——	1 Firkin.
2 Firkins, or 18 Gallons	——	1 Kilderkin.
2 Kilderkins, or 36 Gallons	——	1 Barrel.
1 Barrel and half, or 54 Gallons	——	1 Hogshead.
2 Hogsheads or 3 barrels, or 108 Gallons	——	1 Butt.
2 Butts, or 216 Gallons	——	1 Tun.

Table Cloth Measure.

2 Inches and a Quarter	make	1 Nail.
4 Nails	——	¼ of a Yard.
4 Quarters	——	1 Yard.
¾ of a Yard	——	1 Ell Flemish.
5 Quarters, or 1 Yard 1 Quarter	——	1 Ell English.
6 Quarters	——	1 French Ell.

Measure *of wood for firing*, is the cord, being four feet high, as many broad, and the length of the wood is as by law established, it is divided into two half cords.

Measure *for horses*, is the hand, which by statute contains 4 inches.

Powder Measures, made of copper, holding from an ounce to 12 pounds, are very convenient in a siege, when guns or mortars are to be loaded with loose powder, especially in ricochet-firing, &c.

The French recommend measures that are made of block tin, such as are used for measuring out salt, viz. 1 ounce, 2, 3, 4, 8, which make the half pound; and lastly, of 16, which make the pound. These quantities answer every sort of ordnance.

Diameters and Heights of Cylindric Powder Measures, holding from 1 to 15 Ounces.

Ounces	0	1	2	3	4	5
0	0	1·250	1·583	1·811	1·994	2· 4
1	2·706	2·793	2·876	2·953	3·027	3·098

Diameters and Heights of Cylindric Powder Measures, holding from 1 to 15 Pounds.

Pounds	0	1	2	3	4	5
0	0	3·165	3·988	4·565	5·024	5·412
1	6·890	7·039	7·245	7·442	7·628	7·805

The above are in inches and decimals.

Measure-*angle*, a brass instrument to measure angles, either saliant or rentrant, for exactly ascertaining the number of degrees and minutes, to delineate them on paper.

MEASURING, MENSURATION, in *military mathematics*, the assuming any certain quantity, and expressing the proportion of other similar quantities to the same; or the determining, by a certain known measure, the precise extent, quantity, or capacity of any thing.

Measuring, in *general*, constitutes the practical part of geometry; and from the various subjects which it embraces, it acquires various names, and constitutes various arts, viz.

Longimetry, Altimetry, Levelling, Geodesia, or Surveying, Stereometry, Superficies, and Solids, &c. which see.

Measuring. See Chain.

MECHANICS, a mixed mathematical science, which considers motion and moving powers, their nature and laws, with the effects thereof, in machines, &c. The word is derived from the Greek. That part which considers motion arising from gravity, is sometimes called statics, in contradistinction from that part which considers the mechanical powers and their application, properly called mechanics: it is, in fine, the geometry of motion.

Mechanics. The whole momentum or quantity of force of a moving body, is the result of the quantity of matter, multiplied by the velocity with which it is moved; and when the product arising from the multiplication of the particular quantities of matter in any two bodies, by their respective velocities are equal, their momentum will be so too. Upon this easy principle depends the whole of mechanics; and it holds universally true, that when two bodies are suspended on any machine, so as to act contrary to each other; if the machine be put in motion, and the perpendicular ascent of one body multiplied into its weight, be equal to the perpendicular descent of the other, multiplied into its weight, those bodies, how unequal soever in their weights, will balance each other in all situations: for, as the whole ascent of the one is performed in the same time as the whole descent of the other, their respective velocities must be as the spaces they move through; and the excess of weight in one is compensated by the excess of velocity in the other. Upon this principle it is easy to compute the power of any engine, either simple or compound; for it is only finding how much swifter the power moves than the weight does, (*i. e.* how much further in the same time,) and just so much is the power increased by the help of the engine.

The simple machines usually called mechanic powers, are six in number, *viz.* the *lever*, the *wheel and axle*, the *pulley*, the *inclined plane*, the *wedge*, and the *screw*.

There are four kinds of *levers*: 1st, where the prop is placed between the weight and the power. 2d, where th of the weight from the prop exceeds the distance of the power from the prop. As this kind of lever is disadvantageous to the moving power, it is seldom used.

Wheel and axle. Here the velocity of the power is to the velocity of the weight, as the circumference of the wheel is to the circumference of the axle.

Pulley. A single pulley, that only turns on its axis, and does not move out of its place, serves only to change the direction of the power, but gives no mechanical prop is at one end of the lever, the power at the other, and the weight between them. 3d, where the prop is at one end, the weight at the other, and the power applied between them. 4th, the bended lever, which differs from the first in form, but not in property.

In the first and 2d kind, the advantage gained by the lever, is as the distance of the power from the prop, to the distance of the weight from the prop. In the 3d kind, that there may be a balance between the power and the weight, the intensity of the power must exceed the intensity of the weight, just as much as the distance advantage. The advantage gained in this machine, is always as twice the number of *moveable* pullies; without taking any notice of the *fixed* pullies necessary to compose the system of pullies.

Inclined plane. The advantage gained by the inclined plane, is as great as its length exceeds its perpendicular height. The force wherewith a rolling body descends upon an inclined plane, is to the force of its absolute gravity, as the height of the plane is to its length.

Wedge. This may be considered as two equally inclined planes, joined together at their bases. When the wood does *not* cleave at any distance before the wedge, there will be an equilibrium between the power impelling the wedge, and the resistance of the wood acting against its two sides; when the power is to the resistance, as half the thickness of the wedge at the back, is to the length of either of its sides; because the resistance then acts perpendicular to the sides of the wedge: but when the resistance on both sides acts parallel to the back, the power that balances the resistance on both sides will be, as the length of the whole back of the wedge is to double its perpendicular height. When the wood cleaves at any distance before the wedge, (as it generally does) the power impelling the wedge will be to the resistance of the wood, as half the length of the back is to the length of either of the sides of the cleft, estimated from the top, or acting part of the wedge.

Screw. Here the advantage gained is as much as the circumference of a circle described by the handle of the winch, exceeds the interval or distance between the spirals of the screw.

There are few compound engines, but what, on account of the friction of parts against one another, will require a third part more power to work them when loaded, than what is required to constitute a balance between the power and the weight.

MECHANICAL, something relating to mechanics.

MECHANICAL *philosophy*, that which explains the phenomena of nature, and the operations of corporeal things, on the principles of mechanics; namely, the motion, gravity, figure, arrangement, &c. of the parts which compose natural bodies.

MECHANICAL *powers*. When two heavy bodies or weights are made by any contrivance to act against each other, so as mutually to prevent each other, from being put into motion by gravity, they are said to be in equilibrio. The same expression is used with respect to other forces, which mutually prevent each other from producing motion.

Any force may be compared with gravity, considered as a standard. Weight is the action of gravity on a given mass. Whatever therefore is proved concerning the weights of bodies will be true in like circumstances of other forces.

Weights are supposed to act in lines of direction parallel to each other. In fact, these lines are directed to the centre of the earth, but the angle formed between any two of them within the space occupied by a mechanical engine is so small, that the largest and most accurate astronomical instruments are scarcely capable of exhibiting it.

The simplest of those instruments, by means of which weights or forces are made to act in opposition to each other, are usually termed *mechanical powers*. Their names are, the *lever*, the *axis* or *axle*, and *wheel*, the *pully* or *tackle*, the *inclined plane*, the *wedge*, and the *screw*.

Of the Lever.

The lever is defined to be a moveable and inflexible line, acted upon by three forces, the middle one of which is contrary in direction to the other two.

One of these forces is usually produced by the re-action of a fixed body, called the *fulcrum*.

If two contrary forces be applied to a lever at unequal distances from the fulcrum, they will equiponderate when the forces are to each other in the reciprocal proportion of their distances. For, by the resolution of force it appears, that if two contrary forces be applied to a straight lever, at distances from the fulcrum in the reciprocal proportion of their quantities, and in directions always parallel to each other, the lever will remain at rest in any position.

Since of the three forces which act on the lever, the two which are applied at the extremes, are always in a contrary direction to that which is applied in the space between them: this last force will sustain the effects of the other two; or, in other words, if the fulcrum be placed between the weights, it will be acted upon by their difference.

On the principle of the lever are made, scales for weighing different quantities of various kinds of things; the steelyard, which answers the same purpose by a single weight, removed to different distances from the fulcrum on a graduated arm, according as the body to be weighed is more or less in quantity; and the bent lever balance, which, by the revolution of a fixed weight, increasing in power as it ascends in the arc of a circle, indicates the weight of the counterpoise.

On this principle also, depend the motions of animals; the overcoming or lifting great weights by means of iron levers, called crows; the action of nutcrackers, pincers, and many other instruments of the same nature.

Of the Axis or Axle, and Wheel, and of the Pulley or Tackle.

The axis and wheel may be considered as a lever, one of the forces being applied at the circumference of the axis, and the other at the circumference of the wheel, the central line of the axis being as it were the fulcrum.

For if the semidiameter of the axis, be to the semidiameter of the wheel, reciprocally as the power of A is to the power B, the first of which is applied in the direction of a tangent of the axis, and the other in the direction of the tangent of the wheel, they will be in equilibrium.

To this power may be referred the capstan or crane, by which weights are raised; the winch and barrel, for drawing water, and numberless other machines on the same principle.

The *pully* is likewise explained on the same principle of the lever. Suppose the line A. C. to be a lever, whose arms A. B. and B. C. are equidistant from the fulcrum B. consequently the two equal powers E. and F. applied in the directions of the tangents to the circle in which the extremities are moveable, will be in equilibrium, and the fulcrum B. will sustain both forces.

But, suppose the fulcrum is at C. then a given force at E. will sustain in equilibrium a double force at F. for in that proportion reciprocally are their distances from the fulcrum. Whence it appears, that considering E. as a force, and F. as a weight to be raised, no increase of power is gained, when the pulley is fixed, but that a double increase of power is gained, when the pulley moves with the weight.

A combination of pullies is called a tackle, and a box containing one or more pullies, is called a block.

This is a tackle composed of four pullies, two of which are in the fixed block A. and the other two in the block B. that moves with the weight F. Now, because the rope is equally stretched throughout, each lower pully will be acted upon by an equal part of the weight; and because in each pully that moves with the weight a double increase of power is gained; the force by which F. may be sustained will be equal to half the weight divided by the number of lower pullies: that is, as twice the number of lower pullies is to *one*, so is the weight suspending force.

But if the extremity of the rope C. be affixed to the lower block, it will sustain half as much as a pulley; consequently the analogy will then be, as twice the number of lower pullies, more 2 is to 1, so is the weight suspended to the suspending force.

The pulley or tackle is of such general utility, that it would seem unnecessary to point out any particular instance.

Of the inclined Plane, and of the Wedge.

The inclined plane has in its effects a near analogy to the lever; and the forces by which the same weight tends downwards in the directions of various planes, will be as the sines of their inclinations.

The wedge is composed of two inclined planes joined together at their common bases, in the direction of which the power is impressed.

This instrument is generally used in splitting wood, and was formerly applied in engines for stamping watch plates. The force impressed is commonly a blow, which is found to be much more effectual than a weight or pressure. This may be accounted for on the principles which obtain when resisting bodies are penetrated, as if the mass and velocity vary, the depths to which the impinging body penetrates will be in the compound ratio of the masses and the squares of the velocities.

All cutting instruments may be referred to the wedge. A chizel, or an axe, is a simple wedge; a saw is a number of chizels fixed in a line: a knife may be considered as a simple wedge, when employed in splitting; but if attention be paid to the edge, it is found to be a fine saw, as is evident from the much greater effect all knives produce by a drawing stroke, than what would have followed from a direct action of the edge.

Of the Screw, and of mechanical Engines, in general

The *screw* is composed of two parts, one of which is called the screw, and consists of a spiral protuberance, called the thread, which is wound round a cylinder; and the other called the nut, is perforated to the dimensions of the cylinder, and in the internal cavity is cut a spiral groove adapted to receive the thread.

It would be difficult to enumerate the very many uses to which the screw is applied. It is extremely serviceable in compressing bodies together, as paper, linen, &c. It is the principal organ in all stamping instruments for striking coins, or making impressions on paper, linen, or cards, and is of vast utility to the philosopher, by affording an easy method of measuring or subdividing small spaces.

A very ordinary screw will divide an inch into 5,000 parts; but the fine hardened steel screws, that are applied to astronomical instruments, will go much farther.

It is easy to conceive, that when forces applied to mechanical instruments are in equilibrium, if the least addition be made to one of them, it will preponderate and overcome the effort. But the want of a perfect polish or smoothness in the parts of all instruments, and the rigidity of all ropes, which increases with the tension, are great impediments to motion, and in compounded engines are found to diminish about one fourth of the effect of the power.

The properties of all the mechanical powers depending on the laws of motion, and the action or tendency to produce motion of each of the two forces, being applied in directions contrary to each other, the following general rule for finding the proportion of the forces in equilibrium on any machine will require no proof.

If two weights applied to the extremes of any mechanical engine, be to each other in the reciprocal proportion of the velocities resolved into a perpendicular direction, (rejecting the other part) which would be acquired by each when put in motion for the same indefinitely small time, they will be in equilibrio.

Whence it may be observed, that in all contrivances by which power is gained, a proportional loss is suffered in respect of time. If one man by means of a tackle, can raise as much weight, as ten men could by their unassisted strength, he will be ten times as long about it.

It is convenience alone, and not any actual increase of force, which we obtain from mechanics. As may be illustrated by the following example:

Suppose a man at the top of a house draws up ten weights, one at a time, by a single rope, in ten minutes: let him then have a tackle of five lower pullies, and he will draw up the whole ten at once with the same ease as he before raised up one; but in ten times the time, that is, in ten minutes. Thus we see the same work is performed in the same time, whether the tackle be used or not: but the convenience is, that if the whole ten weights be joined into one, they may be raised with the tackle, though it would be impossible to move them by the unassisted strength of one man; or suppose, instead of ten weights, a man draws ten buckets of water from the hold of a ship in ten minutes, and that the ship being leaky, admits an equal quantity in the same time. It is proposed that by means of a tackle, he shall raise a bucket ten times as capacious. With this assistance he performs it, but in as long a time as he required to draw the ten, and therefore is as far from gaining on the water in this latter case as in the former.

Since then no real gain of force is acquired from mechanical contrivances, there is the greatest reason to conclude, that a perpetual motion is not to be obtained. For in all instruments the friction of their parts, and other resistances, destroy a part of the moving force, and at last put an end to the motion.

Mechanical, in *mathematics*, denotes a construction of some problem, by the assistance of instruments, as the duplicature of the cube, and quadrature of the circle, in contradistinction to that which is done in an accurate and geometrical manner.

MECHE, *Fr.* See Match.

MEDECIN, *Fr.* Physician.

MEDIATOR. Any state or power which interferes to adjust a quarrel between any two or more powers, is called a mediator.

MEDICINE-CHEST, is composed of all sorts of medicines necessary for a campaign, together with such chirurgical instruments as are useful, fitted up in chests, and portable. The army and navy are supplied with these at the expence of government.

Specific regulations have been issued by the war and navy offices, respecting the quantity and quality of the different medicines.

MEDIUM GUARD, a preparatory guard of the broad sword or sabre, which consists in presenting the sword in a perpendicular line with the centre of the opposed object, having the point upwards, the ward iron, and the cutting edge next the object.

MEER BUKSHY, *Ind.* Chief paymaster.

MEER TOZUK, *Ind.* A marshal whose business is to preserve order in a procession or line of march, and to report absentees.

MEGGHETERIARQUE, *Fr.* The commanding officer of a body of men, who formerly did duty at Constantinople, and were called *Héteriennes*, being composed of soldiers that were enlisted in the allied nations.

MELEE, *Fr.* a military term, which is used among the French to express the hurry and confusion of a battle; thus, *Un Général habile conserve sa tranquillité au milieu du combat, et dans l'horreur de la mêlée*:—An able general preserves his presence of mind in the thickest of the battle, and remains calm during the whole of the conflict. *Mêlée* corresponds with the English expression *thick of the fight*.

MEMOIRS, in *military literature*, a species of history, written by persons who had some share in the transactions they relate, answering, in some measure, to what the Romans call *commentarii*, i. e. commentaries. Hence Cæsar's Commentaries, or the Memoirs of his Campaigns.

Memoir is the title given by military officers to those plans which they offer to their government or commanders on subjects relating to war or military economy.

MEMORIAL, an address to the government on any matter of public service

BATTALION-MEN. All the soldiers belonging to the different companies of an infantry regiment are so called, except those of the two flank companies.

Camp-Color MEN Soldiers under the immediate command and direction of the quarter-master of a regiment. Their business is to assist in marking out the lines of an encampment, &c. to carry the camp colors to the field on days of exercise, and fix them occasionally for the purpose of enabling the troops to take up correct points in marching, &c. So that in this respect they frequently, indeed almost always, act as guides, or what the French call *Jalonneurs.* They are likewise employed in the trenches, and in all fatigue duties.

Drag-rope MEN. In the old artillery exercise, the men attached to light or heavy pieces of ordnance, for the purpose of advancing or retreating in action, were so called; the drag rope being exploded for the bricole, the term is preserved merely for explanation. The French *servans à la prolonge* are of this description.

MENACE, an hostile threat. Any officer or soldier using menacing words or gestures in presence of a court-martial, or to a superior officer, is punishable for the same.—See the *Articles of War.*

MENSURATION, in *general,* denotes the act or art of measuring lines, superficies, and solids.

MENSURATION, in *military mathematics,* is the art or science which treats of the measure of extension, or the magnitude of figures; and it is, next to arithmetic, a subject of the greatest use and importance, both in affairs that are absolutely necessary in human life, and in every branch of mathematics: a subject by which sciences are established, and commerce is conducted; by whose aid we manage our business, and inform ourselves of the wonderful operations in nature; by which we measure the heavens and the earth, estimate the capacities of all vessels and bulks of all bodies, gauge our liquors, build edifices, measure our lands and the works of artificers, buy and sell an infinite variety of things necessary in life, and are supplied with the means of making the calculations which are necessary for the construction of almost all machines.

It is evident that the close connection of this subject with the affairs of men would very early evince its importance to them; and accordingly the greatest among them have paid the utmost attention to it; and the chief and most essential discoveries in geometry in all ages, have been made in consequence of their efforts in this subject. Socrates thought that the prime use of geometry was to measure the ground, and indeed this business gave name to the subject; and most of the ancients seem to have had no other end besides *mensuration* in view in all their labored geometrical disquisitions.

clid's elements are almost entirely de- d to it; and although there be contained in them many properties of geometrical figures, which may be applied to other purposes, and indeed of which the moderns have made the most material uses in various disquisitions of exceedingly different kinds; notwithstanding this, Euclid himself seems to have adapted them entirely to this purpose: for, if it be considered that his elements contain a continued chain of reasoning, and of truths, of which the former are successively applied to the discovery of the latter, one proposition depending on another, and the succeeding propositions still approximating towards some particular object near the end of each book; and when at the last we find that object to be the quality, proportion or relation between the magnitudes of figures both plane and solid; it is scarcely possible to avoid allowing this to have been Euclid's grand object. And accordingly he determined the chief properties in the mensuration of rectilineal plane and solid figures; and squared all such planes, and cubed all such solids. The only curve figures which he attempted besides, are the circle and sphere; and when he could not accurately determine their measures, he gave an excellent method of approximating to them, by shewing how in a circle to inscribe a regular polygon which should not touch another circle, concentric with the former, although their circumferences should be ever so near together; and, in like manner, between any two concentric spheres to describe a polyhedron which should not any where touch the inner one: and approximations to their measures are all that have hitherto been given. But although he could not square the circle, nor cube the sphere, he determined the proportion of one circle to another, and of one sphere to another, as well as the proportions of all rectilineal similar figures to one another.

Archimedes took up *mensuration* where Euclid left it, and carried it a great length. He was the first who squared a curvilineal space, unless Hypocrates must be excepted on account of his lunes. In his times the conic sections were admitted in geometry, and he applied himself closely to the measuring of them as well as other figures. Accordingly he determined the relations of spheres, spheroids, and conoids, to cylinders and cones; and the relations of parabolas to rectilineal planes whose quadratures had long before been determined by Euclid. He hath left us also his attempts upon the circle: he proved that a circle is equal to a right angled triangle, whose base is equal to the circumference, and its altitude equal to the radius; and consequently that its area is found by drawing the radius into half the circumference; and so reduced the quadrature of the circle to the determination of the ratio of the diameter to the circumference; but which however hath not yet been done. Being disappointed of the exact quadrature of the circle, for want of the rectification of its circumference, which all his methods would not effect, he proceeded to assign an useful approximation to it: this he effected by the numerical calculation of the perimeters of the inscribed and circumscribed polygons; from which calculations it appears, that the perimeter of the circumscribed regular polygon of 192 sides is to the diameter in a less ratio than that of 3 1-7 (3 10-70) to 1, and that the inscribed polygon of 96 sides is to the diameter in a greater ratio than that of 3 10-71 to 1; and consequently much more than the circumference of the circle is to the diameter in a less ratio than that of 3 1-7 to 1, but greater than that of 3 10-71 to 1: the first ratio of 3 1-7 to 1, reduced to whole numbers, gives that of 22 to 7, for 3 1-7 : 1 : : 22 : 7, which therefore will be nearly the ratio of the circumference to the diameter. From this ratio of the circumference to the diameter he computed the approximate area of the circle, and found it to be to the square of the diameter as 11 to 14. He likewise determined the relation between the circle and elipsis, with that of their similar parts. The hyperbola too in all probability be attempted; but it is not to be supposed, that he met with any success, since approximations to its area are all that can be given by all the methods that have since been invented.

Besides these figures, he hath left us a treatise on the spiral described by a point moving uniformly along a right line, which at the same time moves with an uniform angular motion; and determined the proportion of its area to that of its circumscribed circle, as also the proportion of their sectors.

Throughout the whole works of this great man, which are chiefly on *mensuration*, he every where discovers the deepest design and finest invention; and seems to have been (with Euclid) exceedingly careful of admitting into his demonstrations nothing but principles perfectly geometrical and unexceptionable: and although his most general method of demonstrating the relations of curved figures to straight ones, be by inscribing polygons in them, yet to determine those relations, he does not increase the number and diminish the magnitude of the sides of the polygon *ad infinitum*; but from this plain fundamental principle, allowed in Euclid's elements, viz. that any quantity may be so often multiplied, or added to itself, as that the result shall exceed any proposed finite quantity of the same kind, he proves that to deny his figures to have the proposed relations, would involve an absurdity.

He demonstrated also many properties, particularly in the parabola, by means of certain numerical progressions, whose terms are similar to the inscribed figures: but without considering such series to be continued *ad infinitum*, and then summing up the terms of such infinite series.

He had another very curious and singular contrivance for determining the measures of figures, in which he proceeds, as it were, mechanically by weighing them.

Several other eminent men among the ancients wrote upon this subject, both before and after Euclid and Archimedes; but their attempts were usually upon particular parts of it, and according to methods not essentially different from theirs. Among these are to be reckoned Thales, Anaxagoras, Pythagoras, Bryson, Antiphon, Hypocrates of Chios, Plato, Apollonius, Philo, and Ptolomy; most of whom wrote of the quadrature of the circle, and those after Archimedes, by his method, usually extended the approximation to a greater degree of accuracy.

Many of the moderns have also prosecuted the same problem of the quadrature of the circle, after the same methods, to greater lengths: such are Vieta, and Metius, whose proportion between the diameter and circumference is that of 113 to 355, which is within about $\frac{3}{10000000}$ of the true ratio; but above all, Ludolph van Ceulen, who with an amazing degree of industry and patience, by the same methods extended the ratio to 20 places of figures, making it that of 1 to 3.141592 65358979323846 +.

The first material deviations from the principles used by the ancients in geometrical demonstrations was made by Cavalerius: the sides of their inscribed and circumscribed figures they always supposed of a finite and assignable number and length; he introduced the doctrine of indivisibles, a method which was very general and extensive, and which with great ease and expedition served to measure and compare geometrical figures. Very little new matter however was added to geometry by this method, its facility being its chief advantage. But there was great danger in using it, and it soon led the way to infinitely small elements, and infinitesimals of endless orders; methods which were very useful in solving difficult problems, and in investigating or demonstrating theories that are general and extensive; but sometimes led their incautious followers into errors and mistakes, which occasioned disputes and animosities among them. There were now, however, many excellent things performed in this subject; not only many new things were effected concerning the old figures, but new curves were measured; and for many things which could not be exactly squared or cubed, general and infinite approximating series were assigned, of which the laws of their continuation were manifest, and of some of which the terms were independent on each other. Mr. Wallis, Mr. Huygens, and Mr. James Gregory, performed wonders. Huygens in particular must be admired for his solid, accurate, and very masterly works.

During the preceding state of things

several men, whose vanity seemed to have overcome their regard for truth, asserted that they had discovered the quadrature of the circle, and published their attempts in the form of strict geometrical demonstrations, with such assurance and ambiguity as staggered and misled many who could not so well judge for themselves, and perceive the fallacy of their principles and arguments. Among those were Longomontanus, and the celebrated Hobbes, who obstinately refused all conviction of his errors.

The use of infinites was however disliked by several people, particularly by sir Isaac Newton, who among his numerous and great discoveries hath given us that of the method of fluxions; a discovery of the greatest importance both in philosophy and mathematics; it being a method so general and extensive, as to include all investigations concerning magnitude, distance, motion, velocity, time, &c. with wonderful ease and brevity; a method established by its great author upon true and incontestible principles; principles perfectly consistent with those of the ancients, and which were free from the imperfections and absurdities attending some that had lately been introduced by the moderns; he rejected no quantities as infinitely small, nor supposed any parts of curves to coincide with right lines; but proposed it in such a form as admits of a strict geometrical demonstration. Upon the introduction of this method most sciences assumed a different appearance, and the most abstruse problems became easy and familiar to every one; things which before seemed to be insuperable, became easy examples or particular cases of theories still more general and extensive; rectifications, quadratures, cubatures, tangencies, cases *de maximis & minimis*, and many other subjects, became general problems, and delivered in the form of general theories which included all particular cases: thus, in quadratures, an expression would be investigated which defined the areas of all possible curves whatever, both known and unknown, and which, by proper substitutions, brought out the area for any particular case, either in finite terms, or infinite series, of which any term, or any number of terms could be easily assigned; and the like in other things. And although no curve, whose quadrature was unsuccessfully attempted by the ancients, became by this method perfectly quadrable, there were assigned many general methods of approximating to their areas, of which in all probability the ancients had not the least idea or hope; and innumerable curves were squared which were utterly unknown to them.

The excellency of this method revived some hopes of squaring the circle, and its quadrature was attempted with eagerness The quadrature of a space was now reduced to the finding of the fluent of a given fluxion; but this problem however was found to be incapable of a general solution in finite terms; the fluxion of every fluent was always assignable, but the reverse of this problem could be effected only in particular cases; among the exceptions, to the great grief of the geometers, was included the case of the circle, with regard to all the forms of fluxions attending it. Another method of obtaining the area was tried: of the quantity expressing the fluxion of any area, in general, could be assigned the fluent in the form of an infinite series, which series therefore defined all areas in general, and which, on substituting for particular cases, was often found to break off and terminate, and so afford an area in finite terms; but here again the case of the circle failed, its area still coming out an infinite series. All hopes of the quadrature of the circle being now at an end, the geometricians employed themselves, in discovering and selecting the best forms of infinite series for determining its area, among which it is evident, that those were to be preferred which were simple, and which would converge quickly; but it generally happened, that these two properties were divided, the same series very rarely including them both: the mathematicians in most parts of Europe were now busy, and many series were assigned on all hands, some admired for their simplicity, and others for their rate of convergency; those which converged the quickest, and were at the same time simplest, which therefore were most useful in computing the area of the the circle in numbers, were those in which, besides the radius, the tangent of some certain arc of the circle, was the quantity by whose powers the series converged; and from some of these series's the area hath been computed to a very great extent of figures: Mr. Edmund Hally gave a remarkable one from the tangent of 30 degrees, which was rendered famous by the very industrious Mr. Abraham Sharp, who by means of it extended the area of the circle to 72 places of figures, as may be seen in Sherwin's book of logarithms; but even this was afterwards outdone by Mr. John Machin, who, by means described in professor Hutton's *Mensuration*, composed a series so simple, and which converged so quickly, that by it, in a very little time, he extended the quadrature of the circle to 100 places of figures; from which it appears, that if the diameter be 1, the circumference will be 3.1415926535,8979323846, 2643383279, 5028841971, 6939937510, 5820974944,5923078164, 0628620899, 8628034825, 3421170679 +, and consequently the area will be .7853981633, 9744830961, 5660849819, 857210492, 9234984377, 6455243736, 1480769541, 0157155224, 9657008706, 3355292669 +.

From hence it appears, that all or most of the material improvements or inventions in the principles or method of treating of geometry, have been made especially for the improvement of this chief part of it, *mensuration*, which abundantly shows, what we at first undertook to declare, the dignity of this subject; a subject which, as Dr. Barrow says, after mentioning some other things, "deserves to be more curiously weighed, because from hence a name is imposed upon that mother and mistress of the rest of the mathematical sciences, which is employed about magnitudes, and which is wont to be called *geometry* (a word taken from ancient use, because it was first applied only to measuring the earth, and fixing the limits of possessions) though the name seemed very ridiculous to Plato, who substitutes in its place that more extensive name of *Metrics* or *Mensuration*; and others after him gave it the title of *Pantometry*, because it teaches the method of measuring all kinds of magnitudes." See Surveying, Levelling, and Geometry.

MERHAU, *Ind.* A deduction or abatement is so called in India.

MERIT. Desert, excellence, deserving honor or reward.

MERIT, *Order of*, a military distinction given to officers or soldiers, for some signal service: the badge of which is generally expressive of the service. Such was the medal, or order of merit, presented by the Austrian emperor to the officers of the 15th British light dragoons, for their bravery in the affair of *Villers en Couché*, in 1794.

MERKIN. A mop to clean cannon.

MERLIN. Handspike.

MERLON. See Fortification.

MESS. It is usual and advantageous to discipline that the officers of a camp or garrison form one or more messes.

MESSENGERS of state in England, are officers under the direction of the secretaries of state, of whom there were 20 always in waiting, who were relieved monthly, and distributed in the following manner: four at court, five at each secretary's office, two at the third office for North Britain, three at the council office, and one at the lord chamberlain's office, who attended that office always in readiness to be sent with dispatches, either domestic or foreign; either to apprehend persons *accused* or *suspected* of high treason, or other offences against the state, being empowered by warrant from the secretaries; for the safe keeping of which, their houses are made a sort of confinement or prison; and for the maintenance of the prisoners they have a certain allowance from government. The number has been increased with the system of espionage since 1794.

Military Messengers. Confidential persons that are sent to and from head quarters, &c.

MESTRE *de* CAMP, *Fr.* The commanding officer of a regiment of cavalry was so called in the old French service. He was distinguished by this appellation on account of there being a colonel-general in the cavalry. The duty of a *mestre de camp* was principally confined to the following heads:—To see that the troops or companies were kept complete, that the arms were in good state and condition, the horses of a proper size, sound, and well trained. He had likewise the direction of the different guards, &c.

Mestre *de* Camp *général*, Fr. The next officer in rank, in the old French cavalry service, to the colonel-general. This appointment was created under Henry II. in 1552.

Mestre *de* Camp *général des dragons*, Fr. An appointment which first took place under Louis the XIVth. in 1684.

MESURES *à poudre*, Fr. Tin cases or vessels used in the artillery, to measure out gunpowder, according to the size and calibre of each piece of ordnance. See Powder Measures.

Over-METAL, (in gunnery,) when the mouth of a piece of ordnance, in disparting it, lies higher than the breech, it is then said to be *laid over metal*.

Under-Metal, (in gunnery) is when the mouth of a piece of ordnance lies lower than her breech.

Right with Metal, (in gunnery.) When a piece of ordnance lies truly level, point blank, or right with the mark, she is said to lie *right with her metal*.

Superficies of Metals, (in gunnery.) The surface or outside of a gun.

METIER, *Fr.* Means, literally, any calling or business. In a military sense, it is peculiarly applicable to those nations which keep up large standing armies, and make war their principal object and pursuit. In speaking of military matters, it is common among the French to say—*Guerre sur terre est notre métier; Guerre sur mer est le métier des Anglois*—The land service is our peculiar business or calling; the sea service is the peculiar business or calling of the English; meaning thereby to express their reciprocal superiority.

Chevalier Folard gives the following definition relative to the question which is often discussed on the subject of war, namely, whether war be a trade or a science? The English call it a profession. Folard, however, distinguishes it in this manner:—*La guerre est un métier pour les ignorans, et une science pour les habiles gens.* War in the apprehension, and under the management of ignorant persons, is certainly a mere trade or business, but among able men, it becomes an important branch of science.

METTRE *à la main*, Fr. To grasp or take hold of any thing.

Mettre *l'épée à la main*, Fr. To draw swords. *Ils mirent l'épée à la main*, a figurative expression, signifying, they took their ground, and stood prepared to fight.

Mettre *les armes à la main de quelqu'un*, Fr. To teach a person the first rudiments of war, or lead him for the first time into action. *C'est lui qui m'a mis les armes à la main.* He first taught me how to fight, or I fought the first campaign under his orders.

Mettre *aux arrêts*, Fr. To put under arrest.

Mettre *sur pied*, Fr. To arm, to equip, to put troops upon an established footing.

MEURTRIERES, *Fr.* Small loop holes, sufficiently large to admit the barrel of a rifle gun or musquet, through which soldiers may fire, under cover, against an enemy. They likewise mean the cavities that are made in the walls of a fortified town or place. See Murdresses.

MICHE. See Malingerer.

MICROMETER, (*Micromètre*, Fr.) an instrument contrived to measure small spaces, as in the divisions of the worm of a screw.

MIDI, *Fr.* the South.

MILE, in *geography*, a long measure, whereby the English, &c. express the distance between places: it is of different extent in different countries. The geometrical mile contains 1000 geometrical paces, or *mille passus*, from whence miles are denominated.

We shall here give a table of the miles in use among the principal nations of Europe, in geometrical paces, 60,000 of which, according to the *English Military Dictionary*, make a degree of the equator.

	Geometrical paces.
Mile of Russia - -	750
Italy - -	1000
England - -	1200
Scotland and Ireland	1500
The old league of France -	1500
The small ditto -	2000
The great ditto - -	3000
Mile of Poland - -	3000
Spain and Portugal	3428
Germany - -	4000
Sweden - -	5000
Denmark - -	5010
Hungary -	6000
Holland - -	3500

Mile. Comparison of the different miles, in geometric paces, each of which is equal to 5 feet French royal, 5·6719 feet Rhinland, or 6·1012 English feet.

	geometric paces.
The mile of Sweden	5761
Switzerland	4512
Denmark	4071
Common, of Germany	4000
Holland	3158
League of France	2400
Spain	2286
Scotland	1500
Mile of Italy	1000
England	868
Werste of Russia	575

MILICE, *Fr.* soldiery, but more particularly the militia or trained bands.

Milices *gardes-côtes*, Fr. A militia, somewhat similar to our sea fencibles, which existed during the old French government, and whose services were confined to the coast. Every province, contiguous to the sea, was obliged to furnish a certain proportion of its male inhabitants, from 16 to 60 years old. This militia was exempted from the regulations which governed the land militia. It was under the admiralty.

MILITANT, the state of warfare, or business of war.

MILITAR, } something belonging
MILITARY, } to the soldiery or militia, &c.

Military *architecture*, the same with fortification. See Fortification.

Military *ways*, the large Roman roads which Agrippa procured to be made through the empire in the reign of Augustus for the marching of troops and conveying of carriages. They were paved from the gates of Rome to the utmost limits of the empire. The British have constructed a military road throughout India; with wells and other accommodations at certain distances.

Military *discipline*. Next to the forming of troops, military discipline is the first object that presents itself to our notice: it is the soul of all armies; and unless it be established amongst them with great prudence, and supported with unshaken resolution, soldiers become a contemptible rabble, and are more dangerous to the very state that maintains them, than even its declared enemies. See Discipline.

Military *execution*, the ravaging or destroying of a country or town that refuses to pay the contribution inflicted upon them. Also the punishment inflicted by the sentence of a court-martial.

Military *first principles*, is the bodily training for a soldier, to make him hardy, robust, and capable of preserving health amidst fatigue, bad weather, and change of climate; to march at such possible pace, and for such length of time, and with such burden, as, without training, he would not be able to do.

MILITARY REGULATIONS.--- The rules and regulations, by which the discipline, formations, field exercise, and movements of the whole army, are directed to be observed in one uniform system. The American military system is scarcely entitled to the name of a system; and as to *regulation* that requires yet to be established, the worst of all is that there does not appear to be a suspicion in congress that any regulation is required. See Regulations.

MILITIA. A force whose services, in general, do not exceed the boundaries of the nation, but which may volunteer beyond them. The American militia has no coherent system, every state has power to regulate its own, and the effect is, that there is either no regulation at all, or what is worse, an imbecile mockery, the only use of which is the preservation on the statute book that there is a power though there is not a will to regulate the militia. The militia among the Romans was frequently called Agrarian soldiers. The system of our revolution though it was not complete in general was the most effectual ever established; the French system of conscription was borrowed from America, who borrowed it from the Romans.

MILL, properly denotes a machine for grinding corn, &c. but more generally all such machines whose action depends upon a circular motion. There are various kinds, though foreign to this work.

Gunpowder **Mill**, is that used for pounding and beating together the ingredients of which gunpowder is composed.

These ingredients being duly proportioned, and put into the mortars of the mills, which are hollow pieces of wood, each capable of holding 20 pounds of paste, are incorporated by means of the pestle and spindle. There are 24 mortars in each mill, where are made each day 480 pounds of gunpowder, care being taken to sprinkle the ingredients in the mortars with water, from time to time, lest they should take fire. The pestle is a piece of wood 10 feet high, and 4 1-2 inches broad, armed at bottom with a round piece of metal. It weighs about 60 pounds.

MIM BASHY, *Ind.* A commander of one thousand horse.

MINE, in a *military sense*, implies a subterraneous passage dug under the wall or rampart of a fortification, for the purpose of blowing it up by gunpowder.

The excavation formed by the blowing up of a mine is found by experiment to be nearly a paraboloid. It was formerly supposed that the diameter of the entonnoir, or excavation, was always equal to only double the line of least resistance; but experiments have proved, that the diameter of the excavation may be increased to six times the line of least resistance; and that the diameter of the globe of compression may be increased to eight times that line; this is called the *maximum* of a mine, or the greatest effect that can be produced by a globe of compression. In any mine intended to produce an effect within this extent, the effects will be nearly as the charges.

The globes are to each other as the cubes of their radii Their radii are the hypothenuse of rightangled triangles, of which the line of least resistance, and the semi-diameter of the excavation, are the other two sides. Therefore, to find the charge to produce any required diameter of the excavation, the following will be the rule, the radius being found as above:

As the cube of the radius of the globe of compression in the following table, (having the same line of least resistance as the required globe,)
Is to the cube of the radius of the required globe;
So is the charge corresponding in the following table,
To the charge required.

Table for the Charges of Mines, according to Valliere.

Line of least Resistance.	Charge for the Mine.		Line of least Resistance.	Charge for the Mine.	
Feet.	lbs.	oz.	Feet.	lbs.	oz.
1	0	2	21	868	3
2	0	12	22	998	4
3	2	8	23	1140	10
4	6	—	24	1296	—
5	11	11	25	1558	9
6	20	4	26	1647	12
7	32	2	27	1815	4
8	48	—	28	2058	—
9	68	5	29	2286	7
10	93	12	30	2530	4
11	124	12	31	2792	4
12	162	—	32	3072	—
13	205	15	33	3369	1
14	257	4	34	3680	12
15	316	4	35	4019	8
16	384	—	36	4374	—
17	460	9	37	4748	11
18	546	12	38	5144	4
19	643	—	39	5561	2
20	750	—	40	6000	—

This table is calculated upon a supposition that the excavation of the mine is a paraboloid, having a base double the line of resistance; and that 10 lbs. 10 oz. of powder is sufficient for raising one cubic fathom of earth. By the rule above given may be found the charge for any mine, that shall only shake the ground, without making any excavation, by making the line of least resistance of the required globe only equal to the radius of the globe of compression.

The charges thus found by means of this table, being only for one nature of soil; *viz.* light earth and sand, (that for which the table is calculated) must be augmented according to the following table of Vauban's, by one, four, five, seven, or nine elevenths of the charge found.

Table of the quantity of powder required to raise a cubic fathom, according to the soil.

1	Light earth, mixed with sand . .	11 pounds.
2	Common earth .	12
3	Strong sand .	15
4	Clay, or fat earth .	16
5	Old and good masonry	18
9	Rock . .	20

The following rule is however laid down by Belidor, and generally adopted, if it be intended that the mine shall produce its maximum or greatest effect: multiply the line of least resistance, expressed in feet, by 300, the product will be the charge in pounds.

In making mines of any kind, the following remarks may be of service.

The best form for the chamber would be spherical; but from the difficulty of its construction, it is always made a cube, of one inch larger dimensions than the box to contain the powder.

The chamber must not be made in the prolongation of the branch of the mine, but at one side, and lower than the level of the branch, if the soil be dry; but higher if it be wet.

One cubic foot will contain 75 lbs of powder; upon which principle the size of the case to contain the powder must be regulated. The auget is generally one inch square interior dimensions, and the end of it must reach the centre of the chamber; where the saucisson must be fastened, to prevent its being easily pulled out.

The branch of the mine to be sprung must be closed in the strongest manner by doors well secured by props, and must be stopped with earth or rubbish to a distance, taken in a straight line, equal to 1 1-2 times the line of least resistance

In proportioning the length of saucisson, in order that any number of mines may be fired at the same instant, a return of a right angle is generally reckoned equal to 4 inches in a right line.

The first step in making a mine, whether for attack or defence, is to sink a shaft to the depth of the bottom of the gallery, having two of its sides in the direction of the sides of the gallery These shafts should be where the galleries are to cross each other, or in the centre of the length of gallery to be made. These shafts should never be further apart than 40 or 50 fathoms; for it is found, that the air is not fit for respiration in the larger galleries at a greater distance from the shaft than 25 fathoms; at 20 fathoms in those of medium dimensions; and at 15 in the smallest.

The rectangular frames used in sinking a shaft are commonly placed 4 feet asunder; and in the galleries they are only 3 feet. A gallery intended to be lined with masonry, must be 7 feet high and 6 feet wide, in order that it may be when finished, 6 feet high and 3 feet wide.

Temporary galleries are only made 4 1-2 feet high, and 2 1-2 or 3 feet wide.

The branches, at the ends of which the chambers are to be placed, are only made 2 1-2 or 3 feet high, and 2 feet, or 2 feet 3 inches wide.

The first of these is dug on the knees; the second sitting or lying.

The miners are divided into squads of 4 each; and the rate of the work for each squad is 3 feet of the temporary gallery in 4 hours. The first squad is relieved by a second, after having worked 4 hours, or laid one frame; which second squad is again relieved by the first, at the expiration of the same time.

In the most easy ground to work, a miner may be heard to the distance of 14 or 15 fathoms under ground; and the noise made by fixing the frames of the galleries may often be heard as far as 20 or 25 fathoms. A drum braced, standing on the ground, with a few peas or other round substances on the head, will be very sensibly affected by an approaching miner.

It is of the most essential consequence to place the entrances to the countermines beyond the reach of any surprise from the enemy.

To prevent an enemy gaining possession of the galleries of the countermines they should be well secured by strong doors, at every 15 fathoms. These should be musquet proof.

A glacis, properly countermined, and every advantage taken of it to retard the besiegers, may, with proper management, prolong a siege at least 2 months; and if the rest of the works are also countermined, and properly defended, they may add another month to the siege. Every system of countermines must depend upon the system of fortification to which they are to be adapted; the general principle for their regulation is, that the galleries should occupy situations, from which branches can be most readily run out under the most probable points of the besieger's batteries and approaches. The general system of countermines commonly used in a place prepared before hand, is as follows: the principal or *magistral* gallery runs all round the work, under the banquette of the covert way, and across the places of arms, having the entrances at the re-entering places of arms. Nearly parallel to this at 20, 25 or 30 fathoms distance is another gallery, called the *envellope*. These two galleries are connected by galleries of *communication*, under the gutters of the re-entering parts of the glacis, and under the ridges of the salient parts. From the envellope are run out about 15 or 16 fathoms, galleries in directions parallel to the capitals of the works, and at 23 fathoms distance from each other. These are called *listeners*.

Sometimes, shafts are sunk from the end of these listeners, and by connecting these shafts, a second envellope formed. Behind the escarps of the different works, galleries are likewise made, about the level of the bottom of the ditch; from whence branches may be run out into or under the foundations of the walls; and if the ditch be dry, galleries of communication may be made from these to the magistral gallery; and from which communications branches may be run out for chambers to annoy the besiegers in their passage of the ditch. The entrances to the escarp galleries are by means of posterns, which descend from behind the interior slope of the rampart.

If a place be not countermined before hand, a great deal may be done even after the investment of the place, to prolong the siege by countermines. In this case, the first thing to be done immediately that the place is invested, is to sink a shaft in each of the places of arms of the covert way; one in each branch of the covert way opposite that part of the bastion where the breach will most probably be made; and one in the flanked angle of each bastion. Those on the covert way will be on the banquette, and sunk to about 18 inches below the bottom of the ditch. Those in the bastions to about 12 feet below the bottom of the ditch. Thus prepared, the moment the side on which the attack is to be made can be ascertained, galleries must be carried on from these shafts on the side attacked along the capitals, in the form of trefles, or double T; and advanced as far into the country as the time will admit. Communication galleries may likewise be driven between these different works on the covert way, and from them to the work in the bastion; which will prevent the enemy gaining possession of their entrances. All these works may be carried on after the investment of the place; and be in sufficient forwardness by the time the enemy gains the third parallel.

The following rules are given by Vauban for fougasses, or small mines, having the diameter of the excavation equal to double the line of least resistance. The side of the chamber must be exactly a sixth part of the depth of the shaft. The side of the box to hold the powder exactly a ninth part of the depth of the shaft.

These remarks respecting mines are principally extracted from the General Essay on Fortification before mentioned, written in French and published at Berlin, 1799.

Counter-Mines, are those made by the besieged, whereas mines are generally made by the besiegers. Both mines and counter-mines are made in the same manner, and for the like purposes, viz. to blow up their enemies and their works; only the principal galleries and mines of the besieged, are usually made before the town is besieged, and frequently at the same time the fortification is built, to save expence.

Eventer la Mine, *Fr.* to spring a mine. When used figuratively, this expression signifies to discover a plot, or make it known. It is likewise used to express the failure of any expedition or undertaking.

Definitions of Mines. A mine is a subterraneous cavity made according to the rules of art, in which a certain quantity of powder is lodged, which by its explosion blows up the earth above it.

It has been found by experiments, that the figure produced by the explosion is a *paraboloid*, and that the centre of the powder, or charge, occupies the *focus*.

The place where the powder is lodged is called the *chamber* of the mine, or *fourneau*.

The passage leading to the powder is called the *gallery*.

The line drawn from the centre of the chamber, perpendicular to the nearest surface of the ground, is called the line of least resistance.

The pit or hole, made by springing the mine, is called the *excavation*.

The fire is communicated to the mines by a pipe or hose, made of coarse cloth, whose diameter is about one and a half inch, called a *saucisson*, (for the filling of which near half a pound of powder is allowed to every foot) extending from the chamber to the entrance of the gallery, to the end of which is fixed a match, that the miner who sets fire to it may have time to retire, before it reaches the chamber.

To prevent the powder from contracting any dampness, the saucisson is laid in a small trough, called an *auget* made of boards, three and a half inch broad, joined together, lengthwise, with straw in it, and round the saucisson, with a wooden cover nailed upon it.

Foyer, Fr. *Focus* or *centre of the chamber*, some authors call the end of the saucisson that comes within the work, and which is to be set fire to, the foyer, or focus: but by most people, this is generally understood to be the centre of the chamber.

Galleries and chambers of Mines. Galleries made within the fortification, before the place is attacked, and from which several branches are carried to different places, are generally 4 or 4 1-2 feet wide, and 5 or 5 1-2 feet high. The earth is supported from falling in by arches and walls, as they are to remain for a considerable time; but when mines are made to be used in a short time, then the galleries are but 3 or 3 1-2 feet wide, and 5 feet high, and the earth is supported by wooden frames or props.

The gallery being carried on to the place where the powder is to be lodged, the miners make the chamber. This is generally of a cubical form, large enough to hold the wooden box, which contains the powder necessary for the charge: the box is lined with straw and sand-bags, to prevent the powder from contracting dampness.

The chamber is sunk something lower than the gallery, if the soil permits; but where water is to be apprehended, it must be made higher than the gallery; otherwise the besieged will let in the water, and spoil the mine.

Quantities of powder to charge, Mines. Before any calculation can be made of the proper charge for a mine, the density and tenacity of the soil in which it is to be made, must be ascertained, either by experiment, or otherwise; for, in soils of the same density, that which has the greatest tenacity, will require the greatest force to separate its parts. The density is determined by weighing a cubic foot (or any certain quantity) of the soil; but the tenacity can only be determined by making a mine. The following table contains experiments in 6 different soils, which may be of some assistance to form a judgment of the nature of the soil, when an actual experiment cannot be had

Nature of the soil.	Density.	Tenacity.
	Weight of 1 cubic foot.	Quantity of power to raise 1 cubic fathom.
1. Loose earth or sand	95 pds	8 pds.
2. Common light soil	124	10
3. Loam, or strong soil	127	1¼
4. Potter's clay, or stiff soil	135	13½
5. Clay, mixed with stones	160	16
6. Masonry	205	21½

All the requisites in mining may be determined by the following problems, which admit of 4 cases; for any 3 of the articles below being given, the 4th may thence be found

1. The nature of the soil,
2. The diameter of the excavation,
3. The line of least resistance,
4. The charge.

PROBLEM. I.

Given the nature of the soil, the diameter of the excavation, and the line of least resistance, to find the charge.

RULES.

1. To the square of the diameter of the excavation, add the square of double the line of least resistance, and reserve the said sum.

2. Multiply the square root of the reserved sum by double the line of least resistance, and subtract the product from the same sum.

3. Multiply half the remainder by the line of least resistance, and 1. 57 times the product, will give the solidity of the excavation.

4. The charge will then be determined from the nature of the soil, as in the following example.

Example I.

It is required to make a mine in the second sort of soil, mentioned in the foregoing experiments, which shall have a line of least resistance of 10 feet, and the diameter of its excavation 20 feet; what will be the proper charge?

The nature of this soil, by the table, requires 10 pounds of powder to 216 cubic feet.

Calculation.

1. The diameter of the excavation is 20, and its square	400
Double the line of least resistance is 20, and its square	400
Therefore the sum to be reserved is	800
2. The square root of 800 is 28.3 Double the line of least resistance is 20	566
Which leaves the remainder	234
3. Half the remainder is	117
Which multiplied by the line of least resistance,	10
Gives the product	1170
Which multiplied by	1.57
Gives the solidity of the excavation . . feet	1836.9

feet. lb. feet. lb.
4. If 216 : 10 : : 1836.9 : 85 which is the charge required.

By Logarithms.

1. Diam. of excavation is = 20	1.301030	
Diameter squared is	2.602060	400
Double the line of least resistance is = 20 and its square		400
The sum to be reserved is	2.903090	800
2. Square root of sum is 28.3 .	1.451545	
Double the line of least resistance is = 20	1.301030	
Product to be subtracted is . .	2.752575	566
Remainder is .	2.369216	234
Line of least resist. = 10	1.000000	
10 pounds of powder	1.000000	
To 216 cubic feet, *compl. arith.*	7.665540	
To which add the *const. log.* . .	9.894870	
And the sum is the logarithm charge required	1.929632 = 85 lb.	

PROBLEM II.

Given the nature of the soil, the line of least resistance, and the charge, to find the diameter of the excavation.

RULES.

1. Find the solidity of the earth to be raised, by a proportion from the nature of the soil, and multiply it by 1.27.— Divide the product by the line of least resistance, and to the quotient add the square of the line of least resistance: reserve the sum.

2. Multiply the square root of the sum reserved by twice the line of least resistance, and add the product to the said sum, and from the result subtract 3 times the square of the line of least resistance; so will the square root of the remainder be the diameter of the required excavation.

Example I.

Let a mine be charged with 100 pounds of powder in a soil which requires 11 pounds of powder to raise 216 cubic feet, and let its line of least resistance be 10 feet: what will be the diameter of the excavation?

By the nature of the soil 11lb. : 216 feet : : 100lb. : 1964 feet, which is the solidity of the earth to be raised.

1. Therefore multiply .	1964
By	1.27
The product is .	2494.28
Which divided by the line of least resistance, 10, is	249 428
To which add the square of the line of least resistance	100.000
And the sum to be reserved is	349.428
2. The square root of 349.428 is 18.7, which multiplied by twice the line of least resistance, 20, gives .	374.
This added to the sum reserved gives . .	723.428
From which subtract 3 times the square of least resistance	300.
And there will remain	423.428

The square root of which is, 20.5 feet, being the required diameter of the excavation.

By Logarithms.

	Numb.	Logar.	Numb.
Cubic feet =	216	2.334454	
Powder	11lb. *co. ar.*	8.958607	
Charge =	100	2 000000	
Line of least resist.	10 *co. ar.*	9.000000	
Constant logarithm		0.103804	
		2.396865	249.4
To which add the square of line of least resistance . . .			100.0
Sum to be reserved is		2.543323	349.4
Half of which logar.		1.271661	
Twice line of least resistance, 20,		1.301030	
Product to be added is		2.572691	373.8
The result is . . .			723.2
From which subtract thrice the square of the line of least resistance . .			300.0
And there remains		2.626546	423.2

Half of which logar. is 1.313273 20.57 feet, the diameter of the excavation required.

Loading and stopping of MINES The gallery and chamber being ready to be loaded, a strong box of wood is made of the size and figure of the chamber, being about 1-3d or 1-4th bigger than is required for containing the necessary quantity of powder: against the sides and bottom of the box is put some straw; and this straw is covered over with empty sand bags, to prevent the powder from contracting any dampness: a hole is made in the side next the gallery, near the bottom for the saucisson to pass through, which is fixed to the middle of the bottom, by means of a wooden peg, to prevent its loosening from the powder: or that, if the enemy should get to the entrance, he may not be able to tear it out. This done, the powder is brought in sand bags, and thrown loose in the box, and covered also with straw and sand bags; upon this is put the cover of the box, pressed down very tight with strong props; and, to render them more secure, planks are also put above them, against the earth, and wedged in as fast as possible.

This done the vacant space between the props are filled up with stones and dung, and rammed in the strongest manner: the least neglect in this work will considerably alter the effect of the mine.

Then the auget is laid from the chamber to the entrance of the gallery, with some straw at the bottom; and the saucisson laid in it, with straw over it: lastly, it must be shut with a wooden cover nailed upon it. Great care must be taken, in stopping up the gallery, not to press too hard upon the auget, for fear of spoiling the saucisson, which may hinder the powder from taking fire, and so prevent the mine from springing. The gallery is stopped up with stones, earth, and dung, well rammed, 6 or 7 feet further from the chamber than the length of the line of least resistance.

Globe of compression in MINES, *from Belidor.* If you imagine a large globe of earth homogeneous in all its parts, and a certain quantity of powder lodged in its centre, so as to produce a proper effect without bursting the globe; by setting fire to the powder, it is evident, that the explosion will act all round, to overcome the obstacles which oppose its motion; and as the particles of the earth are porous, they will compress each other in proportion as the flame increases, and the capacity of the chamber increases likewise; but the particles of earth next to the chamber will communicate a part of their motion to those next to them, and those to their neighbours; and this communication will thus continue in a decreasing proportion, till the whole force of explosion is entirely spent; and the particles of earth beyond this term, will remain in the same state as they were at first. The particles of earth that have been acted upon by the force of explosion will compose a globe, which Mr. Belidor calls the *globe of compression.*

MINERS, in a *military sense*, are generally soldiers: most of the European regiments of artillery have each a company of miners, commanded by a captain and two lieutenants. When the miners are at work in the mines, they wear a kind of hood, to keep the earth that falls out of their eyes In the English service the artificers are ordered for that purpose.

Miners *tools*, consist in several sorts of spades, wheel-barrows, axes, hand-levers, chissels, sounding-augres, sledge-hammers, masons' hammers, mattocks, augets, plummets, miner's rule, and miner's dial, &c.

Different sorts of Mines, *are as follows*:

Fougasses, are a sort of small mines, frequently made before the weakest parts of a fortification, as the salient angles and faces, not defended by a cross fire.

Treffle Mines, are mines with two chambers only.

T-Mines, so called from their great resemblance to that letter. They are double mines, having four lodgments.

Double T Mines, have eight lodgments, and four doors.

Triple T-Mines, have twelve lodgments, and six doors.

Double Treffle Mines, have four lodgments, and eight doors.

Triple Treffle-Mines, have six lodgments, and twelve doors.

MINING, in the *art of war*, is become one of the most essential parts of the attack and defence of places; so much artillery is used, that nothing above ground can withstand its effects; the most substantial ramparts and parapets can resist but a short time; the outworks, though numerous serve only to retard for a time the surrender of the place.

History informs us, that mines were made long before the invention of gun powder; for the ancients made galleries or underground passages, much in the same way as the moderns, from without, under the walls of the places, which they cut off from the foundation, and supported them with strong props; then they filled the intervals with all manner of combustibles, which being set on fire burnt their props and the wall being no longer supported, fell, whereby a breach was made.

The besieged also made under-ground passages from the town under the besieger's machines, by which they battered the walls, to destroy them; which proves necessity to have been the inventress of mines, as well as of other arts.

The first mines, since the invention of gunpowder, were made in 1487, by the Genoese, at the attack of Serezanella, a town in Florence; but these failing, they were for some time neglected, till Peter Navarro, being then engineer to the Genoese, and afterwards to the Spaniards in 1503, against the French, at the siege of the castle del Ovo, at Naples, made a mine under the wall, and blew it up. In consequence of which the castle was taken by storm.

M. Valliere relates the same story, but differs in the name of the engineer; he says it was Francis George, an Italian, who, serving at Naples in quality of architect, proposed to Peter Navarro, the Spanish governor to take this castle by mines.

Names of every thing used in Mining.

Auget, a kind of small trough, made of strong inch boards, about 4 inches square, in which the saucisson is laid in straw, to prevent the powder from contracting any dampness.

Chamber, the place where the powder is lodged, being first put in cubical boxes made for that purpose.

Excavation, } the pit or hole made by a
Entonnoir, } mine when sprung.

Focus, the centre of the chamber where the powder is lodged.

Fougas, a kind of small mine.

Fourneau. See Chamber.

Miners Tools, are augers of several sorts, levers of different sorts, needles for working in rocks, rakes, spades, shovels, sledge-hammers, masons' hammers, pick-axes, picks, mattocks, chissels, plummets, rules, a miner's dial, &c.

Line of least resistance, is a line drawn from the centre of the space containing the powder, perpendicular to the nearest surface.

Gallery, the passage leading to the powder.

Saucisson, is a pipe or hose made of coarse cloth, whose diameter is about an inch, and filled with gunpowder; then laid in a trough or auget, which extends from the chamber to the entrance of the gallery, that the miner who sets fire to it, may have time to retire before it reaches to the chamber.

MINING, in *military affairs*, is the art of blowing up any part of a fortification, building, &c. by gunpowder. The art of *mining* requires a perfect knowlege both of fortification and geometry; and by these previous helps, the engineer may be qualified to ascertain correctly the nature of all manner of heights, depths, breadths, and thicknesses; to judge perfectly of slopes and perpendiculars, whether they be such as are parallel to the horizon, or such as are visual; together with the true levels of all kinds of earth. To which must be added, a consummate skill in the quality of rocks, earths, masonary, and sands; the whole accompanied with a thorough knowlege of the strength of all sorts of gunpowder

MINION, a piece of ordnance, of which there are two kinds, the large and ordinary: the large minion has its bore 3¼ inches diameter, and is 1000 pounds weight; its load is 3¼ pounds of powder; its shot three inches in diameter, and 3¼ pounds weight; its length is eight feet, and its level range 125 paces. The ordinary minion is three inches diameter in the bore, and weighs about 800 pounds weight: it is seven feet long, its load 2 1-2 pounds of powder, its shot near three inches in diameter, and weighs three pounds four ounces, and shoots point blank 120 paces.

MINISTER, according to Johnson, is one who acts not by any inherent authority of his own, but under another. Thus in England all ministers act under a supreme authority, which is vested in the king, lords, and commons, to whom they are responsible. In military matters, there is not only a war minister, but a secretary at war, who likewise acts conjointly with the secretary of state. All dispatches and papers of consequence relating to the army must first pass through the secretary of state, and the war minister, before they are laid before parliament, or otherwise acted upon by the secretary at war. The common arrangements of corps, directions with respect to marching, &c. are transmitted to the secretary at war, and to the quarter-master general's office, without previously passing through the secretary of state, or war minister.

Ministre *de la guerre*, Fr. Minister of the war department. The appointment of minister and secretary at war, among the French, first took place in the reign of Henry the II. in 1549. See War.

MINUTE, a hasty sketch taken of any thing in writing. Hence minutes of a general or regimental court-martial.

Minutes *of council in the military department*. The notification of orders and regulations, which are directed to be observed by the British army in India, is so called. These minutes receive the sanction of the governor-general in council, and are the result of previous communications from the court of directors in Europe. They answer to the French word *Résultat*, which was prefixed to all orders and regulations that were occasionally issued by the military boards, or conseils de guerre, for the government of the army. The term, *jugement d'un conseil de guerre*, corresponded with our minutes of a general or regimental court-martial, and expressed not only the minutes but the sentence of the court.

MINUTE, the 60th part of each degree of a circle; and, in computation of time, the 60th part of an hour: it also denotes a short memoir or hasty sketch taken of any thing in writing. See Measure.

La Minute, *Fr.* The original of a sentence or decree.

To **MISBEHAVE**, in a military sense, to act in any manner unbecoming the character of an officer or soldier.

To Misbehave *before the enemy*, to abandon the colors, or shamefully give way in action, &c. See War.

MIQUELETS, *Fr.* A banditti that infest the Pyrenean mountains, and are extremely obnoxious to travellers.

MIQUELETTI. A small body of mountain fusileers, belonging to the Neapolitan army.

MIRE, *Fr.* In the French artillery, a piece of wood about four inches thick, one foot high, and two feet and a half long, which is used in pointing cannon.

Coins de Mire, *Fr.* Wedges made of wood, which serve to raise or depress any piece of ordnance. They are likewise used for the same purpose in mortars.

MIRZA, *Ind.* Sir, lord, master.

MISCELLANEOUS, an item or charge in the estimates of the British army, so distinguished as *miscellaneous services*; the same as our contingent expenditures.

MISERICORDE, *Fr.* a short dagger, which the cavalry formerly used, for the purpose of dispatching an enemy who would not ask quarter or mercy.

MISSILE, } **MISSIVE**, } any weapon which is either thrown by the hand, or which strikes at a distance from the moving power.

MITRAILLE, *Fr.* small pieces of old iron, such as heads of nails, &c. with which pieces of ordnance are frequently loaded.

Tirer à Mitraille, *Fr.* To fire with grape shot. This term is frequently used by the French, to express the bribery which is practised in war time by one nation upon another, for the purpose of fomenting civil insurrections. Hence *tirer à mitraille d'or*.

MITRE, } **MITER**, } a mode of joining two boards, or other pieces of wood together at right angles.

MOAT. A wet or dry ditch, dug round the walls of a town, or fortified place. When an enemy attacks a town, which has dry moats round it, the rampart must be approached by galleries under ground, which galleries are run beneath the moat; when the place is attempted through wet moats, your approaches must be made by galleries above ground, that is to say, by galleries raised above the surface of the water. The brink of the moat next the rampart is called the scarp, and the opposite one the counterscarp.

Dry-Moat, that which has no water. It should invariably be deeper than the one that is full of water.

Flat bottomed Moat, that which hath no sloping, its corners being somewhat rounded.

Lined Moat, that whose scarp and counterscarp are cased with a wall of mason work made aslope.

MODEL, a mould; also a diminutive representation of any thing. Thus models of warlike instruments, fortifications, &c. &c. are preserved in the British laboratory at Woolwich.

MODERN, something of our own times, in opposition to what is antique or ancient.

Modern *Tactics*, *and* Modern *Art of War*. That system of manœuvre and evolution, which has been adopted since the invention of gunpowder, and particularly the system improved by the French within twenty years. See *Am. Mil. Lib.*

Ancient Tactics, and ancient art of War. The system which was pursued by the Greeks and Romans, &c. before the invention of gunpowder and fire arms.

MOGNIONS, from the French Maignon, signifying the stump of a limb. A sort of armor for the shoulders

MOGUL, the emperor of India, from whom the nabobs (properly *Naib*, a deputy,) originally received their appointments, as governors and superintendants of provinces.

Mogul *Tartars*, a nation so called that made considerable conquests in India.

MOHUR, *Ind.* A golden coin, of which there are several values, but generally goes for fifteen or sixteen rupees; a rupee half our dollar.

MOIENNE, *Fr.* A piece of ordnance, which is now called a four pounder, and which is ten feet long, was formerly so called.

MOINEAU, a French term for a little flat bastion, raised upon a re-entering angle, before a curtain which is too long, between two other bastions. It is commonly joined to the curtain, but sometimes separated by a fosse, and then called a detached bastion. They are not raised so high as the works of the place.

Mois *Romains*, Fr. a term used in Germany, to signify a particular tax or contribution, which the emperors had a right to demand on urgent occasions. This tax grew out of an old custom which originally prevailed when the emperors went to Rome to be crowned, and which served to defray their expences thither. Thus when the tax was required, it was called for as a contribution of so many *Roman months;* implying a certain sum for so many.

MOISSON, *Fr.* Harvest. This word is used in various senses by the French, particularly in two of a poetical and figurative kind, viz. *Il a vu cinquante moissons ;* he has lived fifty years, literally, has seen fifty harvests.

Moisson *de lauriers*, Fr. a succession of victories, &c. literally a harvest of laurels.

Moisson *de gloire*, is taken in the same sense.

MOISSONNER *des lauriers*, Fr. To reap laurels.

Moissonner *les hommes*, Fr. To kill off, &c. To mow down men.

MOLLER, *Fr.* Literally means to wax soft. It is used figuratively among the French to signify, in a military sense, the yielding or giving way of armed men, viz. *les troupes mollisent*, the troops gave way.

MOLLESSE, *Fr.* in a figurative sense, signifies want of firmness or resolution. *Je crains la mollesse de vos conseils ;* I mistrust the pliant tendency of your advice or counsel.

MONDE,. Fr. In a military sense, means men or soldiers, viz.

Ce capitaine n'avoit que la moitié de son monde ; such a captain had only half his complement of men.

On a perdue beaucoup de monde, Fr. They lost a considerable number of men.

Il a un monde d'ennemis sur les bras, Fr. he is assailed by a multiplicity of foes.

Aller à l'autre monde, Fr. This expression bears the same import in English that it does in French, viz. to die—literally, to go into the other world.

Le Nouveau Monde, Fr. This term is frequently used to denote America.—Hence *L'Ancien et le Nouveau Monde*, means the two continents.

MONEY-*matters*. An expression in familiar use to express all pecuniary concerns. It cannot be too strongly recommended to every responsible military man to be scrupulously correct on this head. More than half the breaches of friendship and common acquaintance that occur in life, may be traced to irregularity: but in no instance are its effects so fatal, as when the soldier is wronged, or is induced to think so by the omissions, &c. of officers or serjeants

Of the Monies, Weights, and Measures, of Foreign Nations respectively with those of England.

In order to the attainment of a just comparison of foreign monies with our own, the following tables are subjoined.

The first table contains the denominations of the principal foreign monies of account, and their intrinsic value in English money, calculated upon the existing proportion between gold and silver in the respective countries.

The second table shews the names of the principal foreign coins in gold, their weight, their fineness, their pure contents, and the intrinsic value of each in relation to the gold coins of Great Britain.

The third table relates to silver coins, upon similar principles to those of the second.

The comparison of the weights and measures of foreign nations with those of England is established by the following tables.

The fourth table bespeaks the names of the weights used for precious metals, the quantity which each contains in grains troy-weight, and the relation of the several foreign weights to 100 pounds troy-weight.

The fifth table denotes the names of the weights used in the sale of merchandize, the quantity which each contains in troy-weight, and the relation of foreign weights to 100 and to 112 pounds avoirdupois-weight.

The sixth table relates to the measures used in the sale of corn, to the number of English cubic inches of the internal measurement of each, and to the relation of foreign measures to 10 quarters Winchester measure.

The seventh table comprises the measures for liquids, the quantity of English cubic inches which each contains internally, and the relation of foreign measures to 100 gallons English.

The eighth table relates to cloth measures, to the length of each in lines, and to the relation of foreign measures to 100 yards and to 100 ells.

The ninth table is descriptive of measures of length for measuring masts, timber, and other solid bodies, of the number of lines contained in each, and of the proportion between foreign measures of a similar description and 100 feet English.

The tenth table refers to land measures, to the quantity of English square feet which each contains, and to the proportion betwen foreign measures of this description and 100 acres.

The eleventh and last table is founded upon itinerary measures, the length of each in feet, and the proportion between the measures severally adopted in different countries and a degree of the equator.

Independently of the facility which will be afforded by these tables in the comparison of the monies, weights, and measures of foreign nations with those of England, it will not be difficult to find the relation of the monies, weights, and measures of foreign countries, in respect to each other, by the guidance of the explanations at the foot of each of the tables in question.

It will be observed, that in order to avoid the multiplicity of the denominators of fractions, and to give to the several calculations a greater degree of exactitude, the unit has constantly been divided, in the following tables, into 100 parts.

Table, which shews the intrinsic Value of the monies of account of Foreign Nations expressed in pence sterling.

MONIES OF ACCOUNT.

		Pence	100
Aix la Chapelle,	the specie rixdollar	42,	75
	the current rixdollar	32,	25
Amsterdam,	the pound Flemish banco	132,	48
	the florin banco	22,	08
	the pound Flemish current	126,	36
	the florin current	21,	06
Arragon,	the libra jaquesa	47,	80
Augsburgh,	the gulden exchange money	32,	51
	the gulden currency	25,	60
	the gulden white money	21,	33
Barcelona,	the libra catalana	27,	32
Basil,	the rixdollar of exchange	48,	25
	the current rixdollar	43,	40
	the current livre	14,	46
Bengal,	the current rupee	21,	
	the sicca rupee	30,	
Bergamo,	the lira	5,	13
Berlin,	the rixdollar gold currency	39,	66
	the rixdollar silver currency	35,	97
	the pound banco	48,	75
Bern,	the current livre	14,	67
Bologna,	the scudo di cambio	48,	09
	the lira di cambio	11,	31
	the current livre	11,	05
Bolzano,	the gulden exchange money	35,	
	the gulden current money	25,	66
Bombay,	the current rupee	23,	63
Bremen,	the rixdollar	38,	40
Breslaw,	the rixdollar gold currency	39,	66
	the rixdollar silver currency	35,	97
	the pound banco	48,	75
Brunswick,	the current thaler	38,	40
Bussorah,	the mamudi	5,	50
Calcutta,	the sicca rupee	30,	
	the current rupee	21,	
	the arcot rupee	24,	
Canary Islands,	the current real	5,	82
Cassel,	the thaler	38,	40
China,	the tale	80,	
Cologne,	the specie rixdollar	31,	71
	the current rixdollar	30,	92
Copenhagen,	the specie reichsthaler	55,	85
	the current reichsthaler	45,	46
Curaçoa,	the dollar	43,	09

MONIES OF ACCOUNT.

		Pence	100
Dantzic,	the florin	9,	14
Dublin,	the pound Irish	221,	54
Elsinore,	the specie rixdollar	34,	75
	the crown rixdollar	32,	18
	the current rixdollar	30,	92
England,	the pound sterling	240,	
Flanders,	the florin of exchange	20,	25
	the current florin	17,	37
Florence,	the scudo d'oro	62,	45
	the ducato	58,	29
	the pezza of 8 reals	47,	88
	the lira moneta buona	8,	32
France,	the livre tournois	9,	49
	the franc	9,	61
Francfort,	the thaler	38,	40
	the gulden	25,	60
Geneva,	the current crown	49,	20
	the current livre	40	16
	the florin	4,	68
Genoa,	the scudo d'oro marche	89,	50
	the scudo d'argento	73,	13
	the pezza fuor di banco	48,	12
	the scudo di cambio	38,	50
	the lira fuori di banco	8,	37
Germany,	the reichsthaler constitution money	56,	84
	the thaler ditto	42,	63
	the gulden ditto	28,	42
	the reichsthaler convention money	51,	20
	the thaler ditto	38,	40
	the gulden ditto	25,	60
Hamburgh,	the pound Flemish banco	138,	37
	the rixdollar banco	55,	35
	the marc banco	18,	46
	the rixdollar currency	45,	
	themarc currency	15,	
Hanover,	the current thaler	42,	63
Konigsberg,	the gulden	12,	17
Leghorn,	the pezza of 8 reals	47,	88
	the lira moneta buona	8,	32
	the lira moneta lunga	7,	97
Leipsic,	the current thaler	38,	40
Liege,	the gulden	12,	96
Lubec,	the reichsthaler	45,	21
	the marc	15,	07
Lucca,	the scudo d'oro	56,	32
	the lira	7,	51
Madras,	the pagoda of 36 fanams	94,	75
	the Carnatic rupee of 10 fanams	26,	32
Malta,	the silver crown	40,	26
	the copper crown	26,	84
Martinique,	the livre currency	7,	12
Mexico,	the dollar	52,	60
Milan,	the scudo imperiale	64,	14
	the current scudo	45,	33
	the lira currency	7,	88
Modena,	the lira	3,	81
Morocco,	the ducat	105,	
Munich,	the current thaler	32,	04
	the current gulden	21,	36
Naples,	the ducato di regno	42,	50
Navarre,	the ducado of 10 8-9 reals	53,	95
	the libra of 60 maravedis	8,	25
	the real of 36 ditto	4,	95
Nuremberg,	the current thaler	38,	40
	the thaler gold money	38,	95
	the thaler white money	31,	97
Pegu,	the silver tical	33,	70
Persia,	the toman	289,	65
Poland,	the florin of Great Poland	7,	10

MONIES OF ACCOUNT.

		Pence	100
Poland,	the florin of Little Poland	14,	20
Pondicherry,	the pagoda	93,	50
	the current rupee	24,	20
Portugal,	the milreis	67,	50
Prague,	the current gulden	25,	60
Ratisbon,	the gulden white money	25,	60
Riga,	the albertus rixdollar	53,	29
Rome,	the scudo di stampa d'oro	80	92
	the scudo moneta	53,	16
Rostock,	the thaler	45,	20
	the zweydrittel	30,	13
Russia,	the ruble	33,	58
St. Eustatia,	the dollar	38,	25
St. Gall,	the gulden exchange money	27,	90
	the gulden currency	24	
Sardinia,	the lira	11,	50
Siam,	the gold tical	465,	50
	the silver tical	39,	15
Sicily,	the onza	130,	77
Smyrna,	the piastre	13,	50
Spain,	the pistole of exchange	153,	
	the ducat of exchange	52,	73
	the dollar of exchange	38,	25
	the real of plate	4,	78
	the real of vellon	2,	54
Sweden,	the riksdahler	55,	35
Surat,	the rupee	25,	
Surinam,	the florin	25,	25
Trieste,	the gulden of 60 kreitzers	25,	60
	the florin of 5 lire	24,	20
Turin,	the scudo of 6 lire	69,	84
	the lira	11,	64
Turkey,	the piastre	13,	50
United States,	the dollar *at par*	54,	
Valencia,	the libra of 20 sueldos	38,	25
Venice,	the lira piccoli *inclusive of the agio* on the zecchins	5,	12
Vienna,	the current thaler	38,	40
	the current gulden	25,	60
Zante,	the real of 10 lire	41,	15
Zurich,	the gulden exchange money	27,	50
	the gulden currency	25,	

The following example will shew in what manner the relation between the monies of account of any two given countries may be ascertained.

Example.

Let it be required to express, in pence Irish, the value of a marc banco of Hamburgh.

The marc being worth 18,45 pence sterling, and the pound Irish 221,54, according to the table prefixed, I state the following equation:

1 marc banco = x
1 marc ban. = 18,45 pence sterling
221,54 pence ster. = 1 pound Irish
1 pound Irish = 240 pence Irish
Result 19,99 pence Irish.

TABLE, which shews the Weight, Fineness, and pure Contents of the principal Gold Coi of foreign Nations, as well as their intrinsic Value, expressed in English Money.

GOLD COINS.

		Weight Grs 100	Fineness Car.	grs.	Pure contents Grs. 100	Value s.	d. 100
Bavaria,	the carl	150,32	18	$2\frac{5}{8}$	117,18	20	8,87
	the max	100,21	18	$2\frac{2}{3}$	77,94	13	9,54
Bengal,	the gold mohur	176,50	23	3^{3}	174,66	30	10,95
Brunswick,	the carl	102,36	21	3	92,76	16	5,02
Denmark,	the ducat of 12 marcs	48,21	21	$0\frac{2}{3}$	42,52		6,30
England,	the guinea	129,44	22		118,65	21	
	the half guinea	64,72	22		59,33	10	6
	the 7s piece	43,13	22		39,55	7	

GOLD COINS.

		Weight	Fineness		Pure contents	Value	
		Grs. 100	Car.	grs.	Grs. 100	s.	d. 100
Flanders,	the double souverain	171,50	22		157,20	27	9,79
	the souverain	85,75	22		78,60	13	10,89
France,	the louis of 1726	122,90	21	2⅔	110,95	19	7,65
	the louis of 1785	117,83	21	2⅔	106,37	18	9,93
	the 40 franc piece	199,25	21	2⅖	179,32	31	8,85
	the 20 franc piece	99,62	21	2⅖	89,66	15	10,42
Geneva,	the pistole of 1752	87,13	22		79 87	14	1,63
Genoa,	the zecchino	53,80	23	3½	53,52	9	5,67
Germany,	the ducat	53,85	23	2⅔	53,10	9	4,78
Hamburgh,	the ducat	53,85	23	2	52,73	9	4,
Hanover,	the georges	103,03	21	3	93,37	16	6,31
	the gold gulden	50,06	19	0⅓	39,80	7	0,54
Holland,	the ryder	153,54	22		14 ,74	24	10,92
	the ducat	53,85	23	2	52,73	9	4,
Hungary,	the ducat of Kremnitz	53 85	23	3	53,29	9	5,18
Madras,	the star pagoda	52,75	19	2	42,86	7	7,04
Naples,	the onza	68,10	21		59,59	10	6,56
Piedmont,	the zecchino	54,	23	3½	53,72	9	6,09
	the pistole of 1741	110,10	21	3	99,78	17	7,92
	the doppia of 1755	148,50	21	3	134,58	23	9,88
Portugal,	the joanese	221,87	22		203,39	36	
	the moidore	166,	21	3½	151,30	26	9,35
Prussia,	the frederick	103,03	21	3	93,37	16	6,31
Rome,	the zecchino	53,55	23	2	52,43	9	3,36
Russia,	the imperial of 1755	255,53	22		234,23	41	5,49
	the imperial of 1763	202,18	22		185,33	32	9,62
	the imperial of 1801	202,18	23	2½	199,90	35	2,70
Saxony,	the august	102,	21	2⅔	92,08	16	3,57
Siam,	the tical	281,88	19	0¼	224,13	39	8,04
Sicily,	the onza	67,94	21	3	61,57	10	10,77
Spain,	the doubloon before 1772	416,65	21	3¾	380,85	67	4,87
	the doubloon of 1772	416,65	21	2⅔	376,14	66	6,88
	the doubloon of 1785	416,65	21	2	373,25	66	0,74
Sweden,	the adolphus	102,95	15	1⅓	65,77	11	7,70
Tuscany,	the ruopono	161,33	23	3⅔	160,77	28	5,45
United States,	the eagle	268,66	22		246,27	43	7,05
Venice,	the zecchino	54,	23	3½	53,72	9	6,09
Wirtemberg,	the carl	150,32	18	2⅚	117,18	20	8,87

In the first column of this table is shewn the weight of each foreign coin in grains troy-weight; in the second column, the degree of the fineness in carats and grains of a carat; in the third column, the contents of fine gold in grains troy-weight; and in the fourth, the intrinsic value expressed in shillings and pence sterling.

The following example will be of guidance to ascertain the value of foreign coin in other money also foreign.

Example.

It is required to express the value of a louis d'or of France coined since 1785 in the money of Portugal.

As it is seen by the prefixed table that the louis of 24 livres tournois contains 106,37 grains of fine gold, and that the joanese of 6400 reis contains 203,39 grains of fine gold, I state the following equation:

1 louis = x
1 louis = 106,37 grains
203,39 grains = 1 joanese
1 joanese = 6400 reis
Result 3347 reis.

TABLE, *which shews the Weight, Fineness and pure Contents of the principal Silver Coins of foreign Nations, as well as their intrinsic Value, expressed in English Money.*

SILVER COINS.

		Weight	Fineness	Pure contents	Value
		Grs. 100	Oz. dwt.	Grs. 100	*d.* 100
Aix la Chapelle,	the rathspræsentges	95,68	7 1	56,21	7,85
Arabia,	the larin	74,17	10 17½	56,84	7,93
Basil,	the reichsthaler	436,89	10 10	382,28	53·38
Bengal,	the sicca rupee	179,55	11 18½	178,43	24,92
Bern,	the patagon	417,63	10	348,	48,59
Bombay,	the rupee	178,31	11 15	174,60	24.38
Denmark,	the riksdahler	449,87	10 10	393,64	54,97
	the krohn	344,	8 1	230,77	32,23
England,	the crown	464.52	11 2	429,68	60,00
	the shilling	92.90	11 2	85,94	12,
Flanders,	the ducaton	513,29	10 8¼	446,46	62,34
	the croon	456,91	10 8½	395,71	55.26
	the patagon	433,	10 10	378,88	52,91
France,	the ecu of 1726	452,50	10 18	411,03	57,40
	the 5 franc piece	386,14	10 16	347,52	48,53
Geneva,	the patagon	416,87	10	347,38	48,51
Genoa,	the genovina	593,10	11 9	565 93	79,03
	the St. Gianbatista	321,66	11	294,85	41,17
	the giorgino	91,25	10 6⅖	78,58	10,97
	the double madonina	140,19	10 1⅖	117,80	16,45
Germany,	the reichsthaler constitution money	450,97	10 13⅓	400,87	55,98
	the gulden ditto	225,48	10 13⅓	200,43	27,99
	the reichsthaler convention money	432,93	10	360,78	50,38
	the gulden ditto	216,46	10	180,39	25,19
	the old zweydrittel			229,05	31,98
	the new zweydrittel			200,42	27,98
Hamburgh,	the rixdoller banco	450,52	10 13⅓	400,47	55,92
	the marc banco	150, 7	10 13½	133,49	18,64
	the rix dollar lubs	124,41	9	318,30	44,43
	the marc lubs	141,47	9	106,10	14,81
Holland,	the ducatoon	503,50	11 5	472,03	65,91
	the three florin piece	488,	11	447·33	62,46
	the rixdaler	433,17	10 10	379,03	52,93
	the leeuwendaler	422,	8 18	312,98	43,70
	the gold florin	307,	7 7	188,04	26,26
	the current florin	162,70	10 19	148,46	20,73
Madras,	the rupee	178,88	11 16½	176,28	24,61
Milan,	the philip	430,21	11 8⅓	409,30	57,15
Naples,	the ducat	336,	10 19	306,60	42,81
Piedmont,	the ducatoon	491,03	11 8½	467,17	65,23
	the scudo of 1733	459,88	10 19⅙	419,96	58,64
	the scudo of 1755	542,95	10 17⅛	492,05	68,71
Pondicherry,	the rupee	177,27	11 11	170,63	23,83
Poland,	the tympfe	89,75	6 3⅓	46,12	6,44
Portugal,	the cruzade	265,65	10 15½	238,54	33,31
Prussia,	the current rixdollar	343,42	9	257,57	35,97
Rome,	the scudo moneta	408,70	11	374,64	52,31
	the testono	130,54	11	119,67	16,71
	the papeta	81,59	11	74,79	10,44
Russia,	the ruble of 1755	402,76	9 10	318,85	44,52
	the ruble of 1763	369,88	9	277,41	38,74
	the ruble of 1801	77,48	10 8	240,48	33,58
	the livonina of 1757	411,66	9 1¼	310,99	43,41
	the rixdollar albertus	433,17	10 10	379,03	52,93
Saxony,	the old reichsthaler	450,97	10 13⅓	400,87	55,98
	the new reichsthaler	432,93	10	360 78	50,38
	the zweydrittelstucke	212,14	11 6⅔	200,35	27,98
Spain,	the hard dollar before 1772	416,40	10 18¾	378,21	52,90
	the hard dollar since 1772	416,40	10 15⅓	373,03	52,09
Sweden;	the reichsthaler of 1764	451,56	10 10⅙	396,69	55,39

SILVER COINS.

		Weight — Grs. 100	Fineness — Oz.dwt.	Pure contents — Grs. 100	Value — *d.* 100
Sweden,	the ducatoon	484,	11 1¼	446,18	62,30
	the carolin	160,51	8 6⅔	111,47	15,56
	the ten oere silver piece	108,30	5 6½	48,13	6,72
Tuscany,	the francescono	422,75	11 $\overline{3}$	387,52	54,11
	the lanternina	420,	11 1	386,75	54,
	the livornina	402,	11 1	370,18	51,69
United States,	the dollar	409,79	11	375,64	52,45
Venice,	the ducat	350,83	9 18	289,44	40,42
	the scudo	489,54	11	448,75	62,66
	the giustina	433,17	11	397,07	55,45

In the first column of this table is shewn the weight of each foreign coin in grains troy-weight; in the second column, the degree of fineness in carats and grains of a carat; in the third column, the contents of fine silver in grains troy-weight; and in the fourth, the intrinsic value expressed in pence sterling.

The following example will shew in what manner the value of a foreign coin in other money also foreign may be ascertained.

Example.

It is required to express the value of a Spanish hard dollar in the money of France

As it is seen by the prefixed table that the hard dollar contains 373,03 grains of fine silver, and that the piece of 5 francs contains 347 52 grains of fine silver, I state the following equation:

1 hard dollar = x
1 hard dol. = 373,03 grains
347,52 grains = 5 franc piece
Result 5 francs 37 cents

MONIES, in a military sense, are such sums as are issued for public service, and are more specifically distinguished by the appellation of army estimates. It is usual for the secretary at war to move for the estimates of the army. The following sums shew the amount of the British military establishment on the 17th of February, 1801:—

1,615,878*l* for guards and garrisons.

1,743,773*l*. for maintenance of troops abroad

17,232*l* for land forces for Ireland.

355,000*l*. for recruiting in Great Britain.

319 479*l*. for ditto in Ireland.

86,523*l*. for generals and staff officers in Great Britain.

48,197*l*. for ditto in Ireland.

973,433*l*. for militia in Great Britain.

1,338,000*l*. for ditto in Ireland.

57,000*l*. for fencibles in Great Britain.

34,451*l*. for contingencies in Ireland.

25,876*l*. for supernumerary officers.

11,628*l*. for officers' clerks, &c. in Great Britain.

6 416*l*. for ditto in Ireland

255,000*l* for increased rates for subsistence to inn-keepers in Great Britain.

115,384*l*. allowance for beer.

138,979*l*. for reduced officers in Great Britain.

148,382*l*. for the in and out pensioners of Chelsea.

35,923*l*. for ditto of hospital at Kilmainham, near Dublin.

455,000*l*. for volunteer cavalry in Great Britain.

425,139*l*. for ditto in Ireland.

33,394*l*. for foreign troops in British pay.

456,000*l*. for the augmentation of 10,000 in Great Britain.

21,332*l*. for contingencies in Ireland.

To be added, 1,033,750*l*. for the ordnance of the current year.

30,937*l*. for extraordinaries not provided for in 1799.

58,756*l*. for ditto not provided for in 1800.

Regimental MONIES. All sums issued to paymasters for the subsistence, &c. of the men belonging to a regiment, are so called; for the regular distribution of which the paymasters and captains of companies are responsible. *La comptabilité*, among the French, corresponds with this explanation.

Ley-MONEY. The money which is paid for recruiting the army, is so called.

Smart MONEY The money which was paid by the person who has taken the enlisting money, in order to get released from an engagement entered into previous to a regular enlistment.

Bounty MONEY.—See RECRUITING.

MONOMACHY, (*Monomachie*, Fr.) a single combat, or the fighting of two, hand to hand. It is derived from the Greek. A duel may be properly called Monomachy.

MONSON ou **MOUSON**, *Fr.* a word derived from the Arabic, signifying the wind of any particular season, or one that blows regularly. See MONSOONS

MONSOONS. In India the year is divided into two seasons. From the month of October to March, the winds blow from the north-western, and during the rest of the year from the south-eastern points of the compass: these seasons are by mariners called monsoons; the change from the one to the other is generally preceded by an interval of about twenty days, in which calms, or light and uncertain winds prevail: the setting in of the northern monsoons generally falls out some time in the month of September, as that of the southern in the month of April. On the coast of Coromandel the northern monsoon sometimes begins with a violent tempest or hurricane; and if the monsoon sets in with moderation, it is often productive of tempestuous weather at different intervals, until the middle of December, and sometimes later; so that it is held dangerous for any vessels to remain on the coast after the the 15th of October, or to return to it before the 20th of December.

MONTAGNES, *Fr.* Hills, mountains, &c. In a military sense, the term is peculiarly applicable to that species of warfare which is carried on in a mountainous and intersected country. We have already given a general outline of this species of warfare under the head *Guerre de Montagne:* nevertheless the following observations may not appear superfluous or irrelevant in this place. The chevalier Folard has written largely, and with no inconsiderable degree of method, on that part of a war among hills, &c. where an army might run the risk of being surrounded, or shut up. He observes, that a body of men may be drawn into snares by the well concerted movements of an able and active enemy, most especially in a country which is intersected by rivers, and occasionally broken with hills and eminences. Although disasters of this sort are manifest proofs of a want of ability in the person who holds the chief command, they become infinitely more disgraceful when a general runs headlong into a snare, as Euripidas did, without having sufficient courage to attempt a daring enterprize; for it certainly remains with ourselves to determine, whether we chuse to move into an impracticable country; and it equally rests with us to avoid stratagems and snares.

All this, however, depends upon a knowlege of the country into which the war is carried; and as it is impossible to be in possession of the requisite information without some extraneous means, every general ought to lay it down as a maxim, not to advance into a mountainous country without having a good number of intelligent and faithful guides These, in addition to some able topographers, will prevent the possibility of being surprised, and make him thoroughly master of all the passes, &c.

It is not, however, sufficient to be in possession of the heights that immediately command a valley into which an army has moved; in proportion as you advance, you must be certain, that the enemy who retreats before, is not insensibly winding round a second range of hills, to get upon your flanks, or ultimately fall upon your rear.

It moreover frequently happens, that some vallies have not any outlets, and that others become so narrow, that an army is under the necessity of marching by single files, in order to reach a more open piece of ground, or to get at some important pass for the purpose of intercepting or obstructing the march of an enemy

When it is found necessary to retreat, or to march over a country, as Hannibal did over the Alps, it is of little consequence what steps or measures you take, with regard to those parts which you are abandoning; but when you advance against an enemy, and are determined to dispute his march through a valley or hollow way, you must adopt every precaution to secure your rear and flanks, lest, as we have already observed, your antagonist should take advantage of the various passes and intricate bye-ways, which always exists in a mountainous country; and it must always be remembered, that many coups de main, and daring enterprises, may be undertaken by four or five hundred active partizans, which an army would find impracticable.

An able general cannot have a better, or more favorable field to exercise his military genius in, than that which is afforded by a mountainous country. All the chicane and stratagem of war may be resorted to; and however weak an army might be, yet such are the manifold resources of this peculiar kind of contest, that there is scarcely any thing which may not be attempted, provided the officer, who commands, has a thorough knowlege of the country, is fertile in expedients, and has a calm determined mind. Many instances might be adduced to illustrate these observations; we shall be satisfied with stating, that the prince of Conti, in the campaign of 1744, which he so ably conducted, owes a considerable part of his reputation to the scope afforded to his talents by the locality of Piedmont. This country, indeed, as well as Switzerland, seems to have been cut out as the peculiar theatre of great military talents. But neither the prince of Conti, nor the first consul of France, Bonaparte, would have succeeded in the brilliant manner, which they most unquestionably have done, had not the science of topography seconded the natural advantages of that mountainous part of Europe. Massena, Lecourbe, Ney, Lefebvre, Soult, and Macdonald have immortalized themselves in mountain warfare.

MONTE, *Fr* This word is used among the French to express what we mean by *carry;* as, *un vaisseau monté de cinquante pièces de canon:* a ship that carries fifty guns, or a fifty gun ship.

MONTER *la tranchée*, Fr. See To Mount the Trenches.

MONTER *un Vaisseau*, Fr. To embark on board a ship.

Monter, *Fr.* This word likewise means to rise from one rank to another, in the way of promotion, as from cornet or ensign to become lieutenant, from lieutenant to become captain, or from having the command of the youngest company to be promoted to that of the oldest.

MONTH, considered as a military period, in the British service, consists alternately of 30 and 31 days, commencing on the 24th, and ending on the 25th day (inclusive) of each month, properly so called.

Monthly *Abstract.* See Pay.

Monthly *Return.* See Return.

Monthly *Report.* See Report.

Monthly *Inspection.* See Regimental Inspection.

MONT-*joie, Saint Denis*, Fr. a national exclamation, adopted by the French in the reign of Louis, sirnamed Le Gros See Cri des armes.

Mont-*Pagnote ou Poste des invulnérables*, Fr. an expression which is derived from *Pagnote*, a coward, a poltroon; and signifies any eminence or place from whence the operations of a siege, or the actual conflict of two armies, may be seen without personal danger to the curious observer. It is a term of reproach, *C'est un Général qui voit le combat du Mont-Pagnote;* he is one of those generals that look on whilst others fight. During the American war a particular body of refugees or tories who seemed to side with the British, were called *invulnerables*.

Mont-*Pagnote*, in fortification, an eminence where persons post themselves out of the reach of cannon, to see a camp, siege, battle, &c. without being exposed to danger. It is also called the post of the invulnerables.

MONTRE, *Fr.* The review, or muster of the men. *Le régiment a fait montre devant le commissaire.* The regiment has passed muster before the commissary. *Les officiers mirent leur valets dans les rangs, et les firent passer à la montre.* The officers put their servants in the ranks, and made them pass muster.

Montre likewise signified, in the old French service, the money which was paid to soldiers every month, when they passed muster. *Il a recu sa montre;* he has received his monthly pay.

Monture, *Fr.* the complement of men, and number of cannon, on board a French ship of war.

Monture *d'un fusil, d'un pistolet*, Fr. the stock of a gun or pistol.

MONUMENT, (*Monument*, Fr.) In a military sense, any public edifice, pillar, or mark of distinction, which is exhibited to perpetuate the memory of some illustrious character.

MOOTIANA, *Ind.* Soldiers employed to collect the revenue.

MOQUA, MUCK, a frenzical riot of some mahomedans, who have returned from Mecca, against those who have not professed mehomedanism. This horrid custom has been lately practised by the Malays, both at the island of Ceylon, and at the Cape of Good Hope. In the latter place indeed, the fanaticism of one of these blind enthusiasts went so far, that he stabbed a soldier who stood centinel at the governor's gate. His intention was to have destroyed the governor. He that runs the *moqua*, or *muck*, gets intoxicated with bang, or opium, loosens his hair, (which is generally bound up under a handkerchief) then takes a dagger (called a *kreese*) in his hand, whose blade is usually half poisoned, and in the handle of which there is some of his mother's or father's hair preserved, and running about the streets kills all those he meets, who are not mahomedans, till he is killed himself; pretending to believe, that he serves God and Mahomed by destroying their enemies. When one of these madmen is slain, all the mahomedan rabble run to him, and bury him like a saint, every one contributing his mite towards making a noble burial.

MORAILLE, *Fr.* Barnacles. An instrument made commonly of iron for the use of farriers, to hold a horse by the nose, to hinder him from struggling when an incision is made.

Le **MORAL**, *Fr.* This word is frequently used among the French, as a substantive of the masculine gender, to express the moral condition of man. It likewise means the prepossession or assurance which we feel in conscious superiority, viz. *Quand les Anglois se battent sur mer, ils ont le moral pour eux, les Francois l'ont sur terre.*

MORASS, in *military drawings*, denotes moor, marshy, or fenny low grounds, on which waters are lodged.

MORATTOES, *Mahrattahs*, a considerable Hindoo tribe in Hindustan. Their army is chiefly composed of cavalry, and they excel in the management of their horses. The weapon principally used by them in war is a sabre, extremely well tempered, and carefully chosen. Their dress, when accoutred for action, consists of a quilted jacket of cotton cloth, which descends half way down their thighs, and of a thin linen vest, which is fitted close to the body, and is always worn under the jacket. They wear upon their head a broad turban, which is made to reach the shoulders, for the double purpose of covering the neck from the heat of the sun, and of shielding it against the enemy's sabre. Their thighs and legs are covered with a loose kind of trowsers, or cotton overhose. They are extremely temperate, and pay the most minute attention to their horses.

It is now more than a century that the Mahrattahs first made a figure, as the most enterprising soldiers of Hindustan; as the only nation of Indians, which seems to make war an occupation by choice; for the Rajpouts are Hindus, soldiers by birth The strength of their armies consist in their numerous cavalry, which is more capable of resisting fatigue than any in India; large bodies of them having been known to march fifty miles in a day. They avoid general engagements, and seem to have no other idea in making war, but that of doing as much mischief as possible to the enemy's country.

MOREAU, *Fr.* A species of bag which the drivers of mules use to carry their hay It is likewise the name of a celebrated French general, who by his able retreat out of Germany, during the most disastrous period of the French revolution, acquired a reputation, as a general, superior to Xenophon.

MORGLAY, a deadly weapon.

MORTIER, *Fr.* See **Mortar**.

MORION, *Fr.* *Donner sur le morion.* This was a species of punishment which was formerly inflicted upon French soldiers for crimes that were not capital. They were shut up in a guard-house, and received a certain number of strokes with a halbert. The gantelope was substituted in its stead; but neither one or the other are practised in the present French army.

MORISON. See **Helmet**, **Casque**, &c.

MORT *d'Eau*, *Fr.* Low water.

MORTARS, are a kind of short cannon, of a large bore, with chambers: they are made of stone, brass, or iron.— Their use is to throw hollow shells, filled with powder; which, falling on any building, or into the works of a a fortification, burst, and their fragments destroy every thing within reach. Carcasses are also thrown out of them. These are a sort of shells, with 5 holes, filled with pitch and other combustibles, in order to set buildings on fire; and sometimes baskets full of stones, the size of a man's fist, are thrown out of them upon an enemy, placed in the covert-way during a siege. The very ingenious general *Desaguliers* contrived to throw bags, filled with grape-shot, containing in each bag, from 400 to 600 shot of different dimensions, out of mortars; the effect of which is extremely awful and tremendous to troops forming the line of battle, passing a defile, or landing, &c. pouring down shot, not unlike a shower of hail, on a circumference of above 300 feet. They are distinguished chiefly by the diameter of the bore For example, a 13-inch mortar is that, the diameter of whose bore is 13 inches. Ther are some of 10 and 8-inch diameters; and some of a smaller sort, as cohorns of 4.6 inches, and royals of 5.8 inches.

Weight and Dimensions of English Mortars.

Kind.			Weight. Ct.	qr.	lbs.	Length. Ft.	In.	Powder *contained in Chamber. lbs.	oz.	Range at 45°. Yds.
13	Brass	Sea S.	82	—	8	5	3	32	—	4100
	Iron		82	1	—			20	—	
	Brass	Land.	25	—	10	3	7½	9	12	2100
	Iron		36	2	12			9	8	
10	Brass	Sea S.	33	—	—	4	8	12	8	3800
	Iron		41	—	—			10	—	
	Brass	Land.	10	1	25	2	9	4	10	1900
	Iron		16	—	6			4	8	
8	Brass	Land.	4	1	8	2	1¼	2	—	1600
	Iron		8	—	11			2	4	
5½	Brass	Land.	1	—	20	1	4¼	—	9	1200
4 2-5	Brass	Land.	—	3	11	1	1½	—	4½	1040

* See the word *Chambers*, for experiments on the best form.

Ranges with French Mortars, at 45 Degrees, in French Weights and Measures.

12 Inch.			10 Inch, long Ranges			10 Inch, short Ranges.			8 Inch.		
Charge.		Range.	Charge.		Range.	Charge.		Range.	Charge.		Range.
lbs.	oz.	Yards.	lbs.	oz.	Yards.	lbs.	oz.	Yards.	lbs.	oz.	Yards.
1	—	388	1	—	450	1	—	618	—	5	316
1	8	632	2	—	1080	1	8	964	—	10	794
2	—	862	3	—	1536	2	—	1280	—	15	1112
2	8	954	4	—	2070	2	8	1428	1	4	1280
3	—	1292	5	—	2206	3	—	1432			
3	8	1390	6	2½	2304	3	10½	1920			

French Mortars, in their own Weights and Measures.

	lbs.			
12 Inches	2060		3 7	2400
10 for long Ranges	2000		7 4	2800
10 — short do.	1560		4 —	2200
8 ————	595		1 4¼	1160
Stone Mortars.*	1100		2 8	
12 Inch } Gomers	2750		12 —	2700
10 —— } Gomers	2000		6 8	2800
8 —— } Gomers	600		2 —	1400

* Stone Mortars should not be fired at a greater distance than 250 yards.

Ranges with Sea Service, Iron Mortars, at 45 Degrees, upon a Horizontal Plane. 1798.

13 Inch.				10 Inch.			
Charge.		Flight.	Range.	Charge.		Flight.	Range.
lbs.	oz.	Sec.	Yards.	lbs.	oz.	Sec.	Yards.
2	—	13	690	1	—	13	680
4	—	18	1400	2	—	18	1340
6	—	21	1900	3	—	21	1900
8	—	24½	2575	4	—	24½	2500
10	—	26-	2975	5	—	26	2800
12	—	29	3500	6	—	27	3200
14	—	29-	3660	7	—	29	3500
16	—	30	3900	8	—	30	3800
18	—	30-	4200	9	—	30¼	3900
20	—	31	4400	9	8	30½	4000

Ranges with a 10 Inch Sea Mortar, at 21 Degrees, on a Horizontal Plane.

Weight of Moitar.			Weight of Shell		Charge.		Elevation.	Flight	Range.
ct.	qrs.	lbs.	lbs.	oz.	lbs.	oz.	Deg.	Sec.	Yards.
34	2	14	86	—	5	8	21	14¾	2335
			87	—				16	2510

Medium Ranges with Land Service Iron Mortars, at 45 Degrees. 1798.

13 Inch.				10 Inch.			
Ch'ge.		Flig't	Range.	Ch'ge.		Flig't	Range.
lbs.	oz.	Sec.	Yds.	lb.	oz.	Sec.	Yds.
—	14	6½	245	—	8	6½	235
1	—	7-	318	—	10	8	358
1	4	8-	412	—	12	9	464
1	8	9-	523	—	14	10	534
1	12	10-	613	1	—	10-	638
2	—	11	697	1	2	11-	749
2	4	12-	840	1	4	13	873
2	8	13	906	1	6	13-	950
2	12	14	1054	1	8	14	1028
3	—	15	1132	1	10	15	1123
3	4	16	1244	1	12	15	1226
3	8	16-	1317	1	14	16	1325
3	12	17	1424	2	—	16-	1357
4	—	17	1490	2	2	17	1480
4	4	17-	1580	2	4	17-	1532
4	8	18-	1656	2	6	17-	1571
4	12	19	1744	2	8	18-	1700
5	—	19-	1824	2	10	19	1780
5	4	19-	1900	2	12	19-	1825
5	8	20	1950	2	14	20	1880
5	12	20-	2062	3	—	20	1916
6	—	21	2095	4	—	25	2485
7	—	24	2510	4	8	26	2536
8	—	25	2706				

Medium Ranges with Land Service Iron Mortars, at 45 Degrees.

(Continued.)

8 Inch.				5 1-2 Inch, Brass.			
Ch'ge.		Flig't	Range	Ch'ge.		Flig't	Range
lbs.	oz.	Sec.	Yds.	oz.	dr.	Sec.	Yds.
—	5	6	225	1	8	5½	155
—	6	7½	328	1	12	6	198
—	7	8-	428	2	—	6-	255
—	8	9-	474	2	4	7-	316
—	9	10	560	2	8	8	380
—	10	11	664	2	12	8-	426
—	11	12	762	3	—	9-	470
—	12	12-	801	3	4	10	540
—	13	13-	859	3	8	10-	590
—	14	14	960	3	12	11	630
—	15	14-	1011	4	—	11-	725
1	0	14-	1115	4	4	12	746
1	1	15	1156	4	8	12-	800
1	2	16	1262	4	12	13-	910
1	3	16-	1320	5	—	13-	935
1	4	17	1380	5	4	14	1016
1	5	17-	1446	5	8	—	—
1	6	18	1530	5	12	—	—
1	7	18-	1600	6	—	15	1175
1	8	19	1660				
1	9	19-	1720				

Medium Ranges with Brass Mortars, at 45 Degrees. 1780.

13 Inch.*		10 Inch.		8 Inch.	
Ch'ge.	Range	Ch'ge.	Range	Ch'ge.	R'ge
lb. oz.	Y'ds	lb oz.	Y'ds.	oz. dr	Yds
2 12	862	1 10	823	10 8	580
2 14	939	1 11	852	11 —	635
3 —	998	1 12	783	11 8	711
3 2	1003	1 13	758	12 —	708
3 4	1090	1 14	823	12 8	701
3 6	1139	1 15	888	13 —	777
3 8	1165	2 —	892	13 8	825
3 10	1209	2 1	940	14 —	870
3 12	1270	2 2	941	14 8	853
3 14	1322	2 3	1041	15 —	866
4 —	1309	2 4	1128	15 8	899
4 2	1331	2 5	1103	16 —	921
4 4	1391	2 6	1221	16 8	987
4 6	1363	2 7	1258	17 —	987
4 8	1324	2 8	1215	17 8	1062

* For the Ranges with the 5 1-2 inch Brass, see the *Iron Mortars.*

Ranges with a 5 1-2 Inch Brass Mortar, at 15 Degrees.

Charge.	Flight.	First Graze.	Rolled to
oz. dr.	Sec.	Yards.	Yards.
2 8	3	209	303
3 —	3½	256	330
3 8	4	375	443
4 —	4-	457	501
4 8	5	530	600
5 —	5-	561	627
5 8	6-	667	715
6 —	7	709	780

Medium Ranges with Land Service Iron Mortars, at 10 *Degrees Elevation....Powder in Cartridges.*

10 Inch.				8 Inch.			
Flight.	Charge.	First Graze.	Extreme Range.	Flight.	Charge.	First Graze.	Extreme Range.
Sec	lb.oz.	Yds	Yds	Sec	lb.oz.	Yds	Yds.
3	— 12	198	415	3	— 8	202	403
3½	1 —	278	458	3	— 10	266	461
4	1 4	366	564	3½	— 12	351	614
4½	1 8	451	685	4	— 14	413	630
4	1 12	432	686	4¼	1 —	468	754
4¾	2 —	559	938	5	1 2	562	811
5	2 4	602	798	6	1 4	664	950
4¾	2 8	597	976	6½	1 6	700	1028
5	2 12	664	1121	6-	1 8	768	1064
5¼	3 —	764	1169				

Medium Ranges with the above Mortars, at 15 *Degrees.*

10 Inch.			8 Inch.		
Ch'ge	Flig't	Range.	Ch'ge	Flig't	Range
lb. oz.	Sec.	Yards.	lb.oz.	Sec.	Y'ds.
1 4	5	464	— 11	4½	427
1 6	5½	543	— 12	4-	485
1 8	6	590	— 13	5	513
1 12	6¼	685	— 14	5-	559
1 14	7	765	1 —	6-	690
2 —	7	805	1 2	7	822
2 4	7½	884	1 4	7	827
2 8	7¾	960	1 6	7½	1004
2 12	8	1070	1 8	8½	1912
3 —	8½	1154	1 10	8	1196
			1 11	9	1337

All English mortars are erroneously fixto an angle of 45 degrees, and custom has prevailed to lash them strongly with ropes to that elevation. In a siege, shells should never be thrown with an angle of 45 degrees, excepting in one case only; that is, when the battery is so far off that they cannot otherwise reach the works: for when shells are thrown out of the trenches into the works of a fortification, or from the town into the trenches, they should have as little elevation as possible, in order to roll along and not bury themselves; whereby the injury they do, and the terror they cause to the troops, is much greater than if they sink into the ground. On the contrary, when shells are thrown upon magazines, or any other buildings, with an intention to destroy them, the mortars should be elevated as high as possible, that the shells may acquire a greater force in their fall, and consequently do more execution. The British are the only nation that fix mortars to an elevation of 45 degrees, the proper range is from 32 1-2 to 35 degrees.

The use of mortars is thought to be older than that of cannon; for they were employed in the wars of Italy to throw balls of red-hot iron, and stones, long before the invention of shells. It is generally believed, that the Germans were the first inventors, and that they were actually used at the siege of Naples, in the reign of Charles the VIII, in 1435. . History informs us, with more certainty, that shells were thrown out of mortars at the siege of Wachtendouk, in Guelderland, in 1588, by the earl of Mansfield. Shells were first invented by a citizen of Venlo, who, on a festival, celebrated in honor of the duke of Cleves, threw a certain number, one of which fell on a house, and set fire to it; by which misfortune the greatest part of the city was reduced to ashes. Mr. Malter, an English engineer, first taught the French the art of throwing shells, which they practised at the siege of Motte, in 1634. The method of throwing red-hot balls out of mortars, was first put in practice, with certainty, at the siege of Stralsund, in 1675, by the elector of Brandenburg; though some say in 1653, at the siege of Bremen.

Land-MORTARS, are those used in sieges, and of late in battles, mounted on beds; and both mortar and bed are transported on block-carriages. There is also a kind of land-mortars, mounted on travelling carriages, invented by count Buckeburg, which may be elevated to any degree; whereas the British as we have already stated, are fixed to an angle of 45 degrees, and are firmly lashed with ropes

Partridge MORTAR, is a common mortar, surrounded by 13 other little mortars, bored round its circumference in the body of its metal. The centre one is loaded with a shell, and the others with grenades. The vent of the large mortar being fired, communicates its fire to the small ones; so that both shell and grenades go off at once. The French used them in the war of 1701, and more especially at the siege of Lisle, in 1708, and at the defence of Bouchain in 1702.

Hand-MORTARS, were frequently used before the invention of cohorns. They were fixed at the end of a staff of 4 1-2 feet long, the other end being shod with iron to stick in the ground: while the bombardier, with one hand, elevated it at pleasure, he with the other hand fired.

Firelock-MORTARS, *Bombards*, are small mortars, fixed at the end of a firelock: they are loaded as all common firelocks are; and the grenade, placed in the mortar at the end of the barrel, is discharged by a flint-lock; and, to prevent the recoil hurting the bombardier, the bombard rests on a kind of halberd, made for that purpose. They were first invented by major-general Siebach, a German, about the year 1710.

Names of the several parts of a MORTAR.

Grand divisions exterior, viz.—The whole length of the mortar, muzzle, chace, reinforce, breech, trunnions.

Small divisions exterior. The vent, dolphins, vent astragal and fillets, breech ring and ogee, reinforce ring and ogee, reinforce astragal and fillets, muzzle astragal and fillets, muzzle ring and ogee, muzzle moulding, shoulders.

Interior parts. Chamber, bore, mouth, vent.

Chamber in MORTARS, is the place where the powder is lodged. There are different sorts, and made variously by different nations. The Spaniards use chiefly the spheric; the French, Germans, and Dutch, the conic, cylindric, and the concave or bottled; the Portuguese at present, the parabolic; and the English make them in the form of a frustrum of a cone. Each nation has its reasons, good or bad, to prefer their make before that of others: among which the English say the concave and cylindric chambers are the best; the French say the frustrum of a cone.

Sea-MORTARS, are those which are fixed in the bomb-vessels, for bombarding places by sea: they are made somewhat longer, and much heavier than the land-mortars.

Land-MORTAR-BEDS, are made of very solid timber, and placed upon very strong timber frames, fixed in the bomb ketch; to which a pintle is attached in such a manner, that the bed may turn round. The fore part of these beds is an arc of a circle, described from the same centre as the pintle-hole. Land-mortar-beds are now made of cast iron.

Stone-MORTARS, serve to throw stones into the enemy's works, when near at hand; such as from the town into the trenches in the covert-way, or upon the glacis; and from these trenches into the town. The bore is terminated by two quadrants of a circle, terminated by the reinforce and lines drawn from the ends of the cylinder, made to lodge the tompions parallel to the axis of the mortar. The bottom of the conic chamber is terminated by an arc of 60 degrees, and the round part of the outside is a semi-circle.

Chambers in MORTARS, are of different sorts and dimensions. Mr Belidor mentions four; namely, the cylindric, the spheric, the conic, and the concave or bottled; to which a fifth may be added, the parabolic, invented by count de Lippe Buckeburg.

Cylindric chambers. Experience demonstrates, that concave chambers will throw the shell farthest of any with the same charge, yet, in this case, where but little powder is required, in the entrance would become too narrow, and consequently inconvenient to clean; whereas, when they are cylindric, the difference between the advantages of the one and the other will be but little, and not attended with any inconveniences.

Conic chambers, are generally made in a circular form at the bottom, so that the sides produced, meet the extremities of the diameter at the mouth.

Spheric chambers, are much inferior to the cylindric or concave; for it is well known by the properties of geometry, that when a cylinder and a frustrum of a cone occupy equal spaces, the surface of the cone is always greater than that of the cylinder. Hence, if the entrance of these chambers be not made very narrow, contrary to practice, as demonstrated by Mr Muller, in his second edition of Artillery, page 38, of the introduction, and the examples that follow, we conclude that these and the conic chambers are the worst.

Concave chambers. The advantage of these kinds of chambers consist in this, that their entrance may be made narrower than that of any other form; and practice has sufficiently proved it. Yet, when the entrance is so small as not to admit a man's hand, they are not easily cleaned: for which reason it is supposed that all 13 and 10-inch mortars should have concave chambers, and the others cylindric ones.

Parabolic chambers. These chambers, being the widest of any, may therefore be included among the worst; as it is not the inward figure of the chamber, but its entrance, which produces the effect; because the smaller it is, the nearer it reduces the effect into the direction of the shell. It has however one advantage, namely that the shells will have no windage.

Mortar, in *military architecture*, a composition of lime, sand, &c. mixed up with water, that serves as a cement to bind the stones, &c. of any building. Mine sand makes weak mortar, and the rounder the sand, the stronger the mortar; and if the sand is washed before it is mixed, so much the better.

The proportion of lime and sand for making mortar is extremely variable. Some use three parts of pit-sand, and two of river-sand, to one of lime; others, a proportion of sand to quick-lime as 36 to 35. It should be well mixed, and beat every 24 hours for a week together, letting it then lie for a week more; and when it is used, must be beat and mixed again. By this means it will make good mortar, though the lime is but indifferent.

Mortar *for water-courses, cisterns, &c.* is made of lime and hog's lard; sometimes mixed with the juice of figs, and sometimes with liquid pitch, which is first slaked with wine; and, after application, it is washed over with linseed oil.

Mortar *furnaces*, &c. is made with red clay wrought in water wherein horse dung and chimney-soot have been steeped; by which a salt is communicated to the water, that binds the clay, and makes it fit to endure the fire. The clay must not be too fat, lest it should be subject to chinks: nor too lean or sandy, lest it should not bind enough.

Mortar, made of terras, puzolana, tile-dust, or cinders, is mixed and prepared in the same manner as common mortar; only these ingredients are mixed with lime instead of sand in a due proportion, which is to be in equal quantities. As this mortar is to be used in aquatic buildings, the lime should be the very best.

In fortifications, docks, or piers of harbors, lay all the works under water with terras-mortar, and the rest of the facings, both within and without, with cinder or tile-dust mortar, for about two feet deep.

The *East India* **Mortar** for building and plaistering, is made with shell lime, brick dust pulverized, (called *soorkee*) washed sand, and the raw juice of the sugar cane, (called *jaggeree.*) The proportions of different kinds of work are different; but well made and mixed, surpasses all others; the roofs of houses, as well as the floors of their chambers, and the walls are covered with this composition, which, skilfully executed, bears a polish and smoothness like marble.

Mortes-*Payes*, Fr. Soldiers that were paid for the constant duty of a town or fortified place, both in the time of peace and war. Infantry regiments, which were occasionally stationed in citadels and garrisoned towns, took the right of the *mortes-payes*, and had the precedence in chusin lodgings.

MORTISE, a hole cut in wood, so that another piece may be fitted into it.

MORTS, *Fr* The dead on a field of battle are so called.

MOT, *Fr.* Parole, watchword.—This word bears the same import in French that it does in English. See **Parole**.

Donner le **mot**, *Fr.* To give the parole, or watch-word

Aller prendre le **mot**, *Fr.* To go for the parole or watch-word.

On l'envoya porter le **mot**, *Fr.* he was sent with the parole or watch-word.

In the French service *parole* and *countersign* are frequently comprehended under the word *mot*, viz. *Le mot qu'on avoit donné le jour du combat, étoit Saint Louis et Paris;* which according to the English method of giving out orders would have stood thus:—Parole St. Louis, countersign Paris.

Mot *de ralliement*, Fr. Rallying word.

MOTHIR *al moolk*. In Indian fortification, barricadoes, intrenchments, or breastworks, are so called.

MOTION, is defined to be the continued and successive change of place.—There are three general laws of motion: 1 That a body always perseveres in its state of rest, or of uniform motion in a right line, till by some external force it be made to change its place: for as a body is passive in receiving its motion, and the direction of its motion, so it retains them without any change, till it be acted on by something external. 2. The second general law of motion is, that the change of motion is proportional to the force impressed, and is produced in the right line in which that force acts. 3. The third general law of motion is, that action and re-action are equal, with opposite directions, and are to be estimated always in the same right line.

MOTION. A word bearing the same signification as *tems* does in the French. It is peculiarly applicable to the manual and platoon exercise; as, *draw ramrod*, which is done in two motions: —*Tirez la baguette en deux tems.* Motion, in a military sense, is distinguished from movement, inasmuch as the former applies specifically to something done by an individual, with an instrument of war, as handling the firelock; whereas the latter is generally understood to mean the different changes, &c. which are made in evolutions, &c. Motion is the particular adjunct of the manual, and movement that of evolution. The French make the same distinction with respect to *maniement*.

Motion, *mouvement*, Fr. generally so called, a continual and successive change of place.

Motion, *equal or uniform*, (*movement égal, ou uniforme*) that by which a body moves over *equal* spaces in equal times; such are the motions of celestial bodies.

Motion *absolute*, (*mouvement absolu*, Fr.) is a mutation or change of absolute space, and its celerity is measured according to absolute space.

Motion *relative*, (*mouvement relatif*, Fr.) is a change or mutation of relative place, and its celerity is measured according to relative space.

Motion *equally accelerated*, (*mouvement uniformement accéléré*, Fr.) is such whose velocity equally increases in equal times.

Motion, *equally retarded*, (*movement uniformément retardé*) is such whose velocity equally decreases, in equal times, till the body comes to rest.

Motions *of an army*, (*mouvemens d'une armée*, Fr.) are the various changes which it undergoes in marching from one place to another; these are more generally understood by the word movement.

Motions *of the firelock during the manual and platoon exercise*. Motion in this sense is expressed by *tems* among the French. These consist of those prescribed methods which have been explained under *manual*.

The new mode of carrying, (which is with nearly extended arm) is certainly less fatiguing than supporting arms; since the former leaves the circulation of the blood free, and the latter binds the soldier's arm at the elbow. The French allow great latitude in the carrying of the firelock, especially in marching and manœuvring. The men are frequently permitted to slope arms.

Motion *compound*, (*mouvement composé*, Fr.) is the motion of one body impelled by two different powers.

Motion *of projection*, (*mouvement de projection*, Fr.) that by which bodies are impelled through the air, or through any other fluid. A shell which is forced out of a mortar by means of inflammable gunpowder has a *motion of projection*.

Motion *of vibration, or vibrating motion*, (*mouvement de vibration*, Fr.) is the circular motion of a body, which is generally round or spherical.

Motion *of undulation, or undulating motion*, (*mouvement d'ondulation*, Fr.) a circular motion which is perceptible in water, when any hard substance is thrown into it.

Motions *of an enemy*, (*mouvemens d'un ennemi*, Fr.) the different marches, positions, &c. which an enemy takes are so called.

To watch the **Motions** *of an enemy*, (*guêtter un ennemi*, Fr.) To keep a good look out by means of a regular communication between head-quarters, and the outposts of your army. On a large scale, the business of an army of observation is chiefly confined to this species of service. On a more limited one, the duty is frequently entrusted to partisans and light troops.

Motion *of a bomb or ball*. The progress which a bomb or ball makes through the air may be said to consist of three sorts, after it has been delivered out of the mortar, or emitted from a gun or musquet. These are:—

The violent **Motion**, or first explosion, when the powder has worked its effect upon the ball, so far as the bomb or ball may be supposed to move in a right line.

The mixed **Motion**, or yielding impulse, when the natural weight of the bomb or ball begins to overcome the force which was given by the gunpowder.

The natural **Motion**, or exhaustion of the first impulse. This occurs when the bomb or ball is falling to the ground.

To **Motion** *a thing*, to propose it in a military or civil meeting.

Motion, *Fr.* This word has been adopted by the French to convey the same meaning that it does in English, namely, a proposition; hence *appuyer la motion dans une assemblée*; to support a motion in a public assembly or meeting. *Déliberer sur la motion*, to deliberate upon the motion. *Retirer sa motion*, to withdraw one's motion. *Rejecter la motion*, to throw out the motion.

MOTS *d'ordre et de ralliement*, Fr. In a recent publication, written by Paul Thiébault, adjutant-general, on the French staff, the following explanation is given of paroles and countersigns, which may be considered as the free translation of *mots*, with this exception, that the *mot de ralliement* seems peculiarly used in the French service. The parole and countersign only are practised, and their distinct import seems so little understood, that we shall not hesitate to give the whole article from the French.

The **Mots** *d'ordre et de ralliement*, consist of three distinct and separate words, which are chosen for the specific purpose of enabling the soldiers belonging to the same army, to be in perfect intelligence with one another, especially during the night.

These words are composed in the following manner, viz. *Le* **Mot** *d'ordre*, or what we call the parole, must be taken from the name of some deceased person, to which must be added that of some town or country.

The *mot de ralliement*, must consist of a substantive, which does not relate either to the name of a man, the name of a town, or the name of a country.

These three words are given out every morning from head quarters, and are ge-given sealed up, to the officers of the different guards, and to those persons who are entrusted with the command of an outpost, or have the charge of a patrole.

The MOT *d'ordre*, or parole, must never be confided beyond officers and non-commissioned officers; the *mot de ralliement* may in some cases be given to centries that are stationed at some distance from the outposts; but these should invariably consist of old soldiers, whose fidelity and courage can be depended on.

The *mot d'ordre*, or parole, as well as the *mot de ralliement*, is always given out from head quarters; nor ought any general or commanding officer to take upon himself to alter either, except under circumstances so peculiarly urgent, that the good of the service would justify the change. Among these circumstances may be considered, the desertion of a centinel from the out post, and the strong presumption, that the enemy has been made acquainted with the words, &c. Whenever this necessity occurs, all the commanding officers who have any communication with that quarter from whence the parole was issued, should instantly be made acquainted with the alteration

With respect to the manner in which these words are to be delivered out, and the frequency of their circulation, the whole must depend upon circumstances. When an army or body of troops lies at some distance from the enemy, they are usually forwarded to the different quarters, camps, or cantonments, for five, ten, or fifteen days together. When close to the enemy, they are given out, as we have already observed, every day. When there is no ground to apprehend a surprize or attack, one word will be sufficient for each day: but, in critical cases, the parole must be changed two or three times during the night If several corps are cantoned together, the *mot d'ordre*, or parole, must be sent to the officer commanding in the cantonment. When the troops are encamped, it is generally sent to the commanding officer of each regiment, and seldom to the commandant of each brigade.

The MOT, or parole, must always be given out during the day, except in cases of emergency; and it must never be delivered to any person, unless the individual who is entrusted with it be fully convinced, that he is authorised to receive it. It ought indeed to be given personally to him only to whom it is addressed by name. See *Am Mil. Lib.* Art. STAFF.

MOTTO Any sentence, either with or without a badge by which any regiment is particularly distinguished, as for example, the English 3d foot, or old *Buffs*, have a griffin embossed as their badge, and the motto, *Veteri frondescit honore* The colors taken from this regiment in the American revolution are in the war office at Washington.

MOUCHARD, *Fr* a domestic spy, an informer Among the French it more particularly means a person who is employed to watch the motions of any marked man. Creatures of this infamous, although perhaps necessary, class, were constantly attached to the police of France. The term is little known in the United States, unless it be those *mouchards* established in the American coffee houses, to give information to the British consuls. These gentlemen have been called, humorously enough, *reporters*. In a military sense, neither the term nor the practice can be properly understood; at least we should hope so, as it is beneath the high mind of a soldier to *fetch and carry*.

MOVEABLE PIVOT. When the *pivot flank* of any body of men describe in the wheel a smaller circle than the *wheeling flank*, the wheel is said to be made on a moveable pivot.

MOVEMENT. Every inspecting general should notice minutely and comparatively on the performance by each battalion of the great leading points of movement. He is particularly to observe and specify

Whether or not

The original formation be according to order? The marches are made with accuracy, at the required times and length of step, and on such objects as are given.

The proper distances in column and echellon are at all times preserved.

The wheelings are made just, and in the manner prescribed.

The formations into line are made true, without false openings, or necessity of correction.

The officers are alert in their changes of situation, exact in their own personal movements, and loud, decided, and distinct, in their words of command

The march in line is uniformly steady, without floating, opening, or closing.

The march in file, close, firm, and without lengthening out.

The officers, and under-officers, give the aids required of them with due quickness and precision.

Hurry and unnecessary delay, are equally avoided.

In the firings the loading is quick, the levelling is just, the officers animated and exact in their commands.

MOVEMENTS. In cavalry movements the following great leading points should be attended to by every inspecting officer, independent of the circumstances which relate to the dress and general appearance of man and horse, the exercise on foot, &c. &c.

He must particularly observe and specify in his communications to the commanding officer,

Whether or not

The original formation of squadrons and regiments be according to order?

The marches made with accuracy, at

the paces required, and on such objects as have been given?

The proper distance in column are at all times preserved?

The wheelings are made quick, just and in the manner prescribed?

The formations into line are made true in the intended directions, without false openings, or necessity of correction; or that corrections, when necessary are instantly made?

The changes of position are made with due celerity and justness?

The officers are alert in their changes of situation, exact in their own personal movements, and loud, decided, and distinct in their words of command?

The march in line is uniformly steady, without opening, floating, or closing?

The flank march is compact, firm, and without improperly lengthening out?

The officers and under officers give the aids required of them with due quickness and precision?

Hurry and delay, in military movements, are two extremes which should be equally avoided.

In the firings the loading is quick, the levelling is just, and the officers firm in their commands.

The officers, non-commissioned officers, and men ride well, and the horses are active, vigorous, and well broken.—

Movements, in a general sense, may be considered under the following heads, viz. —1st. Offensive movements; the great advantage which attends this movement, consists in the measure having been previously determined upon, and a consequent preparation made for rapid execution before the design is obvious. Much however, will depend, upon the justness of the distances, and of the march in column, having been so taken as to allow of decisive operations. Manœuvre will chiefly operate where an enemy is inferior in number, inexpert in movement, weakly posted, and where the weak point is found out, and is attacked before he can move to strengthen it.

Counter-Movements *of defence*, are movements calculated to defeat any premeditated attack. According to the regulations they may be briefly explained by observing, that if the flank of one body be thrown forward, that of the other may by similar means be thrown back. If one body prolongs its line to outflank, the other may by the same movement maintain its relative situation. Whatever change of position is made by one body, the other may counteract it by a similar change. If the wing of one body is refused, the wing of the others may be advanced to seize an advantage.

Movements *of previous formation*, are military dispositions which every general must have carefully digested, before he advances upon a direct line of offensive rations. A body of troops, which considerable march to make previous to the *attack*, must always approach an enemy in one, or more columns, at open or other distances, according to circumstances. Some general knowlege of an enemy's situation, determines the manner in which he is to be approached, the composition of the columns, the flank of each which leads, and their combination in forming. A nearer view determines a perseverance in the first direction, or a change in the leading flanks, and direction of the columns, in order to form in the most speedy and advantageous manner.

Movements *of attack*, are made by bodies of men advancing in line or column to attack an opposing enemy. When a considerable body of troops is to act offensively, it must form in line at latest within 1200 or 1500 paces of a posted enemy, unless the ground particularly favor, and cover from the fire of the artillery, the enfilade of which is what chiefly prevents bodies in column from approaching nearer; and that space, under the unceasing fire of their own artillery, troops in line will march over in 18 minutes.

Movements of attack, when they are made from a parallel position, must be either in line, or by a flank of the line in echellon, that flank being reinforced, and the other refused; or from a new and advantageous position taken up, and not provided against by the enemy.— From an *oblique* position the attack is directed against a comparatively weak point of the enemy Attacks from the centre are more liable to be enfiladed, and are sooner guarded against than from the flank.

Movements *of retreat*, are combinations of columns of march, covered by positions, and a strong rear guard. Troops are occasionally taken out of the retiring columns of march, to occupy positions and heights; they remain till the rear has passed, and then become the rear guard; this they continue to be, till they find other troops in like manner posted; these last in their turn become also the rear guard, and in this way are the troops of columns in such situations relieved. A rear guard will fall back by the *retreat in line*—the *chequered retreat*—the *passage of lines*—the *echellon* changes of position.

Movements *in echellon of the line.*— Echellon, or diagonal movements, especially of a great corps, are calculated not only to disconcert an enemy, but likewise to enable the army, which adopts them, either to make a partial attack, or a gradual retreat. The attack may be formed from the centre, or from either of the wings reinforced. If successful, the divisions move up into line to improve the advantage: if repulsed, they are in a good situation to protect the retreat. In advancing, the several bodies move independent, act freely, and are ready to assist: in retiring, they fall gradually back on each other, and thereby give mutual aid and support. Echellon movements, in fact, comprise within themselves all the essential principles of extension and compression, which are found in close or open column, with the additional advantage of being better adapted to throw a considerable line into an oblique position, of presenting a narrow front, with the means of increasing it at pleasure, unexposed to the enemy's fire and of diminishing it with the same facility and safety.

Echellon Movements *on an oblique line*, are best calculated to outwing an enemy, or to preserve the points of appui of a wing; possessing this advantage, that such movement may not be perceptible to the enemy, as they are short and independent lines, and when seen at a distance, appear as if a full line.

Echellon movements by half battalions or less, are made by their directing flank, which is always the one advanced from, or wheeled to. Echellon movements by whole battalions, are governed by their advanced serjeants Echellon movements by several battalions are made in line, each by its own centre, and the whole by the directing flank.

Movements *that are made in face of an enemy.* (*Mouvemens devant l'ennemi* Fr.) There is no operation in war which requires so much nicety, precision, and judgement, as that of retreating in the presence of an enemy. Every movement from the direct line of battle is more or less critical; but when a regiment is obliged to retire under the eye, and perhaps the fire of a pursuing foe, the utmost presence of mind is required in the officers who command, and the greatest steadiness in the men. In a situation of this sort it becomes the peculiar duty of the field officers, to see that every change of manœuvre, and every movement, be made with promptitude and accuracy. For although they be subordinate to others, and must of course, follow superior directions, yet so much of the executive duty rests with them that their character and abilities, as officers, will be more conspicuous on these occasions than in any other. The movements of a corps which retreats, consist in retrograde marches, in line, by alternate companies, in column, by wings, or in square.

Eventail or Fan Movement. This movement is performed on the march, and must be begun at a distance behind the line, proportionate to the body which is to oblique and form. It may be applied to one battalion, but hardly to a more considerable body, which would find great difficulty in the execution. It gives a gradual increase of front during a progressive movement. With justness it can be made on a front division only, not on a central or rear one: in proportion as the leading platoon shortens its step, will the one behind it, and successively each other come up into line with it. As soon as the colors of the battalion come up, they become the leading point. Although it is an operation of more difficulty, yet if the leading division continues the ordinary, and the obliquing ones take the quick step, till they successively are up with it, a battalion column which is placed behind the flank of a line, may, in this manner, during the march, and when near to the enemy, gradually lengthen out that line.

Vourff or quick Movement. This movement is frequently resorted to when the head of a considerable open column in march arrives at, or near the point from which it is to take an oblique position facing to its then rear, and at which points its third, fourth, or any other named battalion, is to be placed.

The justness of the movement depends on the points in the new direction being taken up quickly, and with precision. On the previous determination that a certain battalion, or division of a battalion, shall pass or halt at the point of intersection; and that every part of the column which is behind that battalion, shall throw itself into open column on the new line behind the point of intersection, ready to prolong or to form the line whenever it comes to its turn.

This movement will often take place in the change of position of a second line, and is performed by all those that are behind the division, which is to stop at the point where the old and new lines intersect. And at all times when the open column changes into a direction on which it is to form, and that the division which is to be placed at the point of entry can be determined, it much facilitates the operation to make every thing behind that division gain the new line as quick as possible, without waiting till the head of the column halts.

MOUFLE, *Fr.* a sort of stuffed glove. It is common among the French to say, *Il ne faut pas y aller sans moufles;* figuratively meaning, that no dangerous enterprise ought to be undertaken without sufficient force to carry it into execution.

MOUILLAGE, *Fr.* Anchorage.

MOUILLER, *Fr.* To anchor. To let go the anchor.

MOULDS, for casting shot for guns, musquets, rifles, and pistols: the first are of iron, used by the founders, and the others by the artillery in the field, and in garrison.

Laboratory Moulds, are made of wood, for filling and driving all sorts of rockets, and cartridges, &c.

MOULDINGS, *of a gun or mortar*, are all the eminent parts, as squares or rounds, which serve for ornaments: such as the breech-mouldings. The rings, &c. are also called mouldings.

MOULE. *Fr.* See Mould.

Moule *de fusée volante*, Fr. a piece of round wood used in fireworks.

MOULIN, *Fr.* a mill.

Moulin *à bras portatif*, Fr. a species of hand-mill, which was invented in France by le Sieur de Lavault, and which has been found extremely useful to troops on service. Ten of these mills may be conveniently placed on one waggon.

MOUND, in *old military books*, is a term used for a bank or rampart, or other defence, particularly that of earth.

MOUNTEE, an alarm to mount or go upon some warlike expedition

Half or small **MOUNTING**. The shirt, shoes, stock, and hose, or stockings which were formerly furnished by the colonels or commandants of corps every year. This mode of distribution, which engendered a multiplicity of abuses, has been abolished in the British service: in lieu of which, a regulation has taken place, that (if *honestly* attended to) must be highly beneficial to the soldier.

In lieu of the small articles of clothing, which were annually given, by the colonels of regiments, to non-commissioned officers and private soldiers, and were called *small* or *half* mounting, two pair of good shoes, of the value of five shillings and sixpence each, have been substituted. These shoes are to be provided in conformity to a pattern lodged at the office of the comptrollers of the accompts of the army; and patterns of the shoes are to be approved and sealed by the general officers of the clothing board, at the same time, and in like manner, as for the clothing: one pair is to be delivered out at the annual period of clothing, and the other pair at the end of six months from that time; and in order to prevent the injury that the shoes might sustain, from remaining a long time in store in the East and West Indies, they are to be forwarded to corps on those stations at two different periods, instead of sending the whole quantity with the clothing.

Should the price of good shoes at any time exceed five shillings and sixpence per pair, the difference, which shall be declared by the clothing board at their first meeting on, or after the 25th of April in each year, is to be charged to the respective accompts of the non-commissioned officers and soldiers receiving them, but with respect to the 5th battalion of the 60th regiment, the difference is to be taken between four shillings and sixpence paid by the colonel, and the actual price declared as above mentioned.

The allowances, directed to be given by the colonels, in lieu of the former small articles, called *half mounting*, are to be regularly credited to the men, and to be expended for their use, in such articles as are suitable to the respective climates in which they are serving.

Non-commissioned officers and soldiers of infantry, dying or discharged before the completion of a full year, from the usual day of delivering the annual clothing of their regiments, have no demand whatever on account thereof.

A recruit, who comes into the regiment after the proper time of the delivery of the clothing, is entitled to a pair of shoes at the next delivery of that article.

The compensation money to be given to each serjeant in the infantry in lieu of half-mounting is - - 0 14 0
To each corporal, drummer, and private, - - } 0 11 0

To **MOUNT**, is a word variously made use of in military matters, as

To MOUNT *Cannon*. To place any piece of ordnance on its frame, for the more easy carriage and management of it in firing. Hence to dismount is to take cannon from any serviceable position.

To MOUNT *a breach*, to run up in a quick and determined manner to any breach made in a wall, &c.

To MOUNT *guard*, to do duty in a town or garrison, in a camp, or at out quarters.

To MOUNT, to place on horseback, to furnish with horses; as, twelve thousand men have been well mounted, without any considerable expence to the country. A cavalry regiment may be said to be well or ill mounted; in either of which cases, the commanding officer is generally blameable or praise-worthy.

To mount likewise signifies the act of getting on horseback, according to prescribed military rules: as, to prepare to mount, is when the left hand files move their horses forward in the manner described under unlink your horses. The dragoons put their firelocks into the buckets, and buckle them on, doubling the strap twice round the barrel, come to the front of the horses, fasten the links, throw them over the horses' heads with the left hand round the horses' heads, take their swords, and buckle them tight into the belt, take the bit reins up, then take a lock of the mane, and put it into the left hand, the left foot into the stirrup, and the right hand on the cantle of the saddle, waiting for the word *mount*; when they spring smartly up, and look to the right of the rear. At the next signal, they must throw the leg well over the *valise*, and place themselves well in the saddle, with the right hand leaning on the off holster. The men must be careful not to check the horses with the bits in mounting. In mounting and dismounting, the files that move forward must take care to keep their horses straight, and at the prescribed distances from each other; and when mounting, as soon as the gloves are on, belts right, &c. the left files must dress well to the right, putting the horses straight, and leaving distance enough for the right files to come in.

To MOUNT *a gun*, is either to put the gun into its carriage, or else when in the carriage, to raise the mouth higher.

MOUNTAINS, *called Great and Little St. Bernard*. A part of the Alps, situated in the Glacieres of Switzerland, which has been rendered famous in modern history by the passage of the French army under Bonaparte. The following account is extracted from a French publication, and cannot fail of being interesting to the military reader, as it is told in the plain and simple language of a soldier, who was present during the whole of this astonishing campaign. On the 16th of May, 1800, the vanguard, commanded by general Lannes, climbed up the mountain: the Austrians, although greatly inferior in number, defended themselves step by step, and never disappeared till they perceived another corps of the French army descending the mountain of the Little St. Bernard, menacing their rear, and absolutely interrupting their retreat.

The first division of the army, under general Watrin, followed the movement of the vanguard

Until this period of time, neither artillery nor ammunition had crossed either eminence; the whole was collected at St. Peter, (a small village at the foot of the mountain) where the park of artillery was established. It appeared at first impossible to transport this heavy and embarrassing ordnance across the mountain; however it was natural to consider the question, *what is an army in the present day without artillery?* Its necessity in this respect was manifest and imperious.

The artillery corps immediately set about dismounting the cannons, caissons, forges, &c. piecemeal. Gassendi, inspector of ordnance, gave directions for hollowing a number of the trunks of trees in the same manner that wood is hollowed for troughs. The pieces of cannon were deposited in these machines, and after having been drawn up these almost inaccessible heghts, by five or six hundred men, according to the weight of metal, were left to slide down the steep declivities. The wheels were carried up on poles; and sledges made expressly for the purpose at Auxonne, conveyed the axle trees, and the empty caissons, and lastly, mules were loaded with ammunition in boxes made of fir.

The exertion of a whole battalion was requisite for the conveyance of one field piece with its proportion of ammunition: one half of the regiment could only draw the load, while the other half was obliged to carry the knapsacks, firelocks, cartridge boxes, canteens, kettles, and more especially five days provisions, in bread, meat, salt, and biscuit.

Such was the commencement of the march of the French army across the Alps.

MOUNTING *and* DISMOUNTING, *when the horses are to be led away.* It frequently happens, especially in retreating or advancing, that it may be necessary to cover the defiling of a regiment by dismounting a squadron, or part of one, to flank the mouth of a defile. This is generally effected by lining the hedges, &c. and keeping up a hot fire upon the enemy. It follows, of course, that the horses cannot be linked together, but they must be led away (in a retreat) to the most convenient spot in the defile for the men to mount again. In advancing they must be led to a spot where they will not impede the defiling of the regiment, but where they will be at hand for the dismounted parties to mount.

Guard MOUNTING. The hour at which any guard is mounted obtains this appellation, viz. *The officers will assemble at guard mounting.*

MOURIR, *Fr.* To die.

MOURIR *d'un bel epée*, Fr. A French phrase, which signifies to fall under the hands of an enemy of great skill and reputation.

MOURNE, that part of a lance or halbert to which the steel or blade is fixed.

MOUSER. An ironical term, which is sometimes used in military sport to distinguish battalion men from the flank companies. It is indeed generally applied to them by the grenadiers and light bobs, meaning that while the latter are detached, the former remain in quarters, like cats, to watch the mice, &c.

MOUSQUET, *Fr.* Musquet. This word, which signifies an old weapon of offence that was formerly fired by means of a lighted match, has been variously used among the French, viz. *gros mousquet*, a heavy musquet; *un petit mousquet*, a short musquet; *un mousquet leger*, a light musquet.

Recevoir un coup de MOUSQUET, *Fr.* To receive a musquet shot.

Porter le MOUSQUET *dans une campagnie d'infanterie*, Fr. To stand in the ranks as a foot soldier.

MOUSQUETADE, *Fr.* a musquet shot. *Il fut tué d'une mousquetade;* he was killed by a musquet shot. This term is generally used to express a smart discharge of musquetry: *On a entendu une vive* MOUSQUETADE; they have heard a brisk discharge of musquetry.

MOUSQUETAIRES, Musqueteers, *Fr.* A body of men so called during the old government of France. It consisted of two companies, selected from the young men of noble extraction. The first company was formed in 1622, by Louis XIII. out of another company, called his Majesty's Carabineers. The king was captain, so that the person who commanded had only the rank of captain lieutenant. The company remained upon this footing until 1646, when it was reduced at the instigation of cardinal Mazarine, who from personal motives, had taken a decided aversion to it. But Louis XIV. restored it in 1657, by the same appellation, and increased the establishment to 150 musqueteers. They were commanded by one captain-lieutenant, one sub-lieutenant, two ensigns, and two quarter-masters.

The second company, when first created, was attached to cardinal Mazarine as his personal guard; but the officers received their commissions from the king.

An alteration took place in the management of this company in 1660, the men being incorporated with the rest of the troops that were destined for the immediate protection of his majesty's person. In consequence of this change they did duty on foot, but were again mounted, in order to accompany the expedition against Marsal, which took place that year.

Louis XIV. named himself captain of this company, as well as of the first; and from that period both companies became subject to the same regulations, with no other difference, than that of precedency as first and second company. From the year 1663, the establishment of each company was 300, exclusive of the officers. They were subsequently reduced to a lower establishment. Having originally been raised to serve on foot or horseback, the mousquetaires were allowed drums and fifes when they acted as infantry troops; and trumpets when they acted as cavalry. In 1663 hautboys were substituted for fifes and trumpets. It is supposed that mounted drummers were first used among the mousquetaires du Roi. Previous to the revolution, each of these companies consisted of one captain-lieutenant, two sub-lieutenants, two ensigns, two cornets, two aid-majors, eight quarter-masters, four brigadiers, sixteen sub-brigadiers, six standard-bearers, one ensign or color-bearer, one hundred and eighty musqueteers, six drummers, four hautboys, one commissary, one chaplain, one quarter-master serjeant, one surgeon, one apothecary, one blacksmith, one saddler, and three treasurers.

This corps was raised, not only for the purpose of attending his majesty on foot or horseback, and of going on service, as circumstances might require, but it was further intended to be a sort of military school for the French nobility. Several princes, almost all the general officers, and old marshals of France, were indebted to this establishment for the first elements of military science.

The officers, belonging to these companies, clothed, armed, and mounted themselves, without putting government to the expence of one shilling. Their uniform was a scarlet coat faced with the same, and a scarlet waistcoat. Those attached to the first company had gold buttons and button-holes, and their coats were edged with gold. Those attached to the second company, had the same ornaments in silver: their hats, in which they wore a white feather, were laced according to the same distinction, as were likewise their horse cloths and holsters. Instead of the musquet, which they formerly carried, they were latterly armed with a carbine, two pistols in the saddle-bow, and a sword calculated for infantry or cavalry duty. The brigadiers and sub-brigadiers were armed in the same manner. The quarter-masters, when mounted, had only a sword and two pistols, but on foot they each carried a halbert or pike, which they used as the serjeants belonging to infantry regiments were directed to do.

The cloaks and great coats of the mousquetaires were made of blue cloth laced with silver. The quarter-masters, brigadiers, and sub-brigadiers, wore the same, with more or less lace according to the rank they held. These cloaks, &c. were distinguished from those worn by the rest of the army; having white crosses sewed before and behind with red streaks running into the corners or rentrant angles. The first company was marked with red, and the second with yellow streaks. The uniform of the superior officers, (who were generally called *officires a busse-col*, or officers wearing gorgets or breast-plates) was embroidered in gold or silver, according to the company which they commanded. The troop horses of the first company, were of a white or dapple-grey color; those of the second company were black. Each company had a flag and two standards; so that when the mousquetaires served on foot, the flag or color was unfurled, and the standards were cased; and when they were mounted, the standards were displayed, and the colors cased. The standards belonging to the first company represented a bomb falling upon a besieged town, with this motto: *Quo ruit et letbum:* those of the second company bore a bunch of arrows, with these words underneath: *Alterius Jovis altera tela*. The mousquetaires received their colors from the king's hands.

The mousquetaires never served on horseback, except when the king travelled: on those occasions they stood next to the light horse. Their duty when on foot, was the same as that of the royal regiment of guards.

When they did duty on foot at the palace, they were provided with a handsome table at the expence of the civil list. The two companies always mounted guard without being mixed with any other troops; whereas the rest of the household did duty by detachment.

The mousquetaires did not take rank in the army, but they enjoyed the same privileges that were attached to the body guards, gensdarmes, and light horse.—They were frequently called *mousquetaires gris*, and *mousquetaires noirs*, from the color of their horses.

MOUSSE, *Fr.* Moss.

Mousse, *garcon de board*, Fr. a cabin boy. The *Powder Monkey*, on board ships of war, corresponds with the term Mousse. According to a French writer, these boys were so hardly used in the old French navy, that, whether they deserved punishment or not, some captains of ships directed them to be chastised regularly once a week.

MOUSTACHE, *Fr.* This word was originally derived from the Greek, adopted by the Italians, subsequently by the

French, and then used generally. It literally means the hair which is allowed to grow upon the upper lip of a man; and which is better known amongst us by the familiar term whiskers. The French use it in a figurative sense, viz.

Enlever sur la moustache, jusque sur la moustache de quelqu'un, Fr. To seize or take possession of any thing under the very nose, or in the presence of a person. *Les ennemis sont venus pour défendre cette place, on la leur a enlevée sur la moustache.* The enemy drew near to defend the town, but it was taken under their very whiskers.

Donner sur la Moustache, *Fr.* To give a slap on the face.

MOUTARDE, *Fr.* means literally mustard. The word, however, is frequently used by the French in a figurative sense, viz. *S'amuser à la moutarde.* To be uselessly employed, or busy about nothing. It is likewise used to express impatience: *La moutarde lui monte au nez*, Fr. The mustard rises in his nose, that is, he grows restless and impatient.

C'est de la Moutarde *après diner*, Fr. This expression is in general use among the French, and signifies, that assistance, &c. is brought when there is no longer need of it. When commissaries, &c. make up a lame account for monies received, it is common to say. *Et le reste en moutarde.*

MOUTH. See *Muzzle.*

MOUTH *of* FIRE. The entrance into the garrison of Gibraltar by the grand battery and the old Mole, is so called by the Spaniards, on account of the formidable appearance of the ordnance from the lines.

MOUTONNIER, *Fr.* Sheep-like; gregarious.

MOUVEMENS *de Tête*, Fr. Motions of the head. For the English explanation of these motions, see *eyes.* The French express them in the following manner: *Tête à droite*, right dress.—*Tête à gauche*, left dress.—*Fixe*, front dress.

Mouvemens *des troupes sous les armes*, Fr. By these are understood the different changes of position, and the various facings which soldiers go through under arms.

Mouvemens *de pied ferme*, Fr. That exercise, consisting of the manual and facings, which a soldier performs, without quitting his original ground. The left foot on this occasion becomes a standing pivot.

Mouvemens *ouverts*, Fr. Movements, or evolutions, which are made at open order.

Mouvemens *serrés*, Fr. Movements, or evolutions, which are made at close order.

Mouvemens *opposés*, Fr. Opposite movements, or evolutions.

Mouvement, *Fr.* See Movement.

Mouvement, *Fr.* See Motion for its general acceptation.

Mouvemens, *Fr.* Commotions, broils.

MOYENNE, *Fr.* A piece of ordnance formerly so called. See Minion.

MOYEN. The bastions which are constructed on the angles are called royal bastions. Some engineers have distinguished those bastions by the name of *moyens royaux*, or medium royals, whose flanks contain from ninety to one hundred toises.

Moyenne *Ville*, Fr. A term given by the French to any town in which the garrison is equal to the third of the inhabitants, and which is not deemed sufficiently important to bear the expence of a citadel; more especially so, because it is not in the power of the inhabitants to form seditious meetings without the knowlege of the soldiers who are quartered on them.

MOYENS *côtés*, Fr. In fortification, are those sides which contain from eighty to one hundred and twenty toises in extent: these are always fortified with bastions on their angles. The *moyens côtés* are generally found along the extent of irregular places; and each one of these is individually subdivided into small, mean, and great sides.

MUD-WALLS. The ancient fortifications consisted chiefly of mud or clay, thrown up in any convenient form for defence against sudden inroads.

MUET, *Fr.* See Mute.

To MUFFLE. To wrap any thing up so as to deaden the sound, which might otherwise issue from the contact of two hard substances. When the French effected their passage over the march Albaredo, on their route to the plain of Marengo, they were so much exposed to the Austrians, that, in order to get their artillery and ammunition over, without being betrayed by the noise of the carriage wheels, and the clattering of the horses' shoes, both were muffled with bands of hay and straw, and dung was spread over the ground. In this manner they crossed that stupendous rock. Thirty men were put to the drag ropes of each piece, and as many were employed to draw up the caissons.

Muffled. Drums are muffled at military funerals or burials, and at military executions, particularly when a soldier is shot for some capital crime.

MUGS. An Indian nation, living on the borders of Bengal and Arracan.

MUHLAGIS, *Fr.* Turkish cavalry which is mounted by expert horsemen, who generally attend the beglierbeys. They are not numerous.

MULATTOS, (*Mulâtre*, Fr.) In the Indies, denotes one begotten by a negro man on an Indian woman, or by an Indian man on a negro woman. Those begotten of a Spanish woman and Indian man are called *metis*, and those begotten of a savage by a *metis*, are called *jambis.* They also differ very much in color, and in their hair.

Generally speaking, especially in Europe, and in the West Indies, a Mulatto is one begotten by a white man on a negro woman, or by a negro man on a white woman. The word is Spanish, *mulata*, and formed of *mula*, a mule, being begotten as it were of two different species.

Mulattoes abound in the West Indies; so much so, that on the dangerous symptoms of insurrection, which appeared among the blacks after the success of Toussaint in St. Domingo, a proposal was made to the British government by a rich planter, to raise a mulatto corps, as an intermediate check upon the blacks. After six months suspence, the memorial was rejected by the war-minister.

MULCT. A soldier is said to be mulct of his pay when put under fine or stoppages for necessaries, or to make good some dilapidations committed by him on the property of the people or government.

MULTANGULAR, is said of a figure, or body which has many angles.

MULTILATERAL, having many sides.

MULTIPLE, one number containing another several times: as 9 is the multiple of 3, 16 that of 4, and so on.

MUNIMELL, a strong hold, fortification, &c.

MUNITION, *Fr.* This word is used among the French to express not only victuals and provisions, but also military stores and ammunition.

Munitions *de bouche*, Fr. Victuals or provisions, (such as bread, salt, meat, vegetables, butter, wine, beer, brandy, &c. which may be procured for soldiers) are so called by the French. Corn, oats, hay, straw, and green forage, for cavalry, bear the same appellation. See Subsistence.

Munitions *de guerre*, Fr. Military stores, such as gunpowder, shot, balls, bullets, matches, &c. See Stores.

MUNITIONNAIRE *ou entrepreneur des vivres*, Fr. Military purveyor, or commissary of stores. Amaury Bourguignon, from Niort, a town of Poitou, was the first *munitionnaire* and *entrepréneur général*, or purveyor-general, among the French. He was appointed in the reign of Henry III. in 1574. See Purveyor.

Munitionnaire *pour la marine*, Fr. The head of the victualling office was so called among the French. There was a person on board every ship of war, called *commis*, or clerk, who acted under his orders. The appointment of the latter was somewhat similar to that of a purser in the British navy.

MUNSUBDAR, *Ind.* A title which gives the person invested with it, a right to have the command of ten thousand horse, with the permission of bearing amongst his ensigns that of the fish; neither of which distinctions is ever granted, excepting to persons of the first note in the empire. The office is called a *Munsub*, and it is generally supported by a district named, on which the corps is quartered.

MUR, *Fr.* a wall.

MUR CRENELE, *Fr.* A wall which has small intervals or spaces at the top, that serve more for ornament or ostentation than for real defence. This method of building prevailed very much in former times.

Mur *de face*, Fr. Outside wall of any building

Mur *de face de-devant*, Fr. Front outside wall; it is likewise called *mur anterieur.*

Mur *de face de derrière*, Fr. The wall which forms the backside of a building is so called: it is likewise named *mur postérieur.*

Murs *lateraux*, Fr. The side walls of a building.

Gros Murs, *Fr.* All front and partition walls are so called.

Mur *de pierres lècbes*, Fr. A wall that is built of stone, without mortar or cement. Walls of this construction are seen in several counties in England, particlarly in the west country.

Mur *en l'air*, Fr. Every wall is so called that does not rise uniformly from a parallel foundation. Walls built upon arches are of this description.

Mur *mitoyen*, Fr. Partition wall.

Mur *d'appui*, Fr. Wall of support. Any wall that is built to support a quay, terrace, or balcony, or to secure the sides of a bridge, is so called. *Mur de parapet*, or parapet wall, may be considered as a wall of support.

MURAGE. Money appropriated to the repair of military works, was anciently so called.

MURAILLE *de revêtement*, Fr. the wall which surrounds a fortified place is so called.

Charger en Muraille, *Fr.* To charge or attack an enemy, in a firm, compact, and steady line.

MURAL-*Crown*. See Crown.

Couronne MURALE, Fr. See Mural-Crown.

MURDRESSES, in *ancient fortification*, a sort of battlement with interstices, raised on the tops of towers to fire through.

Ville MUREE, *Fr.* A walled town.

MURRION. See Morion.

MURTHERERS, or *murthering pieces*, small pieces of ordnance, having chambers, and made to load at the breech. They were mostly used at sea, in order to clear the decks when an enemy boarded a vessel.

MUSCULUS. Kennett in his Roman Antiquities, page 237, says, "the Musculus is conceived to have been much of the same nature as the *testudines*; but it seems to have been of a smaller size, and composed of stronger materials, being exposed a much longer time to the force of the enemy; for in these *musculi*, the pioneers were sent to the very walls, where they were to continue, while with their dolabræ or pick-axes, and other instruments, they endeavored to undermine the foundations. Cæsar has described the *musculus* at large in his second book of the civil wars.

MUSIC, a general term for the musicians of a *regimental band*.

MUSICIANS. It has been often asked, why the dress of musicians, drummers and fifers, should be of so varied and motley a composition, making them appear more like harlequins and mountebanks, than military appendages? The following anecdote will explain the reason, as far at least as it regards the British service:—The musicians belonging to the English guards formerly wore plain blue coats, so that the instant they came off duty, and frequently in the intervals between, they visited alehouses, &c. without changing their uniform, and thus added considerably to its wear and tear. It will be here remarked, that the clothing of the musicians then fell wholly upon the colonels of regiments; no allowance being specifically made for that article by the public. It is probable, that some general officer undertook to prevent this abuse by obtaining permission to cloth the musicians, &c. in so fantastical a manner that they would be ashamed to exhibit themselves at public-houses, &c.

PHRYGIAN MUSIC. A martial sort of ancient music, which excited men to rage and battle: by this mode Timotheus stirred up Alexander to arms.

Modes of Music. There were three modes among the ancients, which took their names from particular countries, namely, the *Lydian*, the *Phrygian*, and the *Doric*.

MUSKET, MUSQUET, the most serviceable and commodious fire-arm used by an army. It carries a ball of 18 to 1 pound. Its length is 3 feet 6 inches from the muzzle to the pan. The Spaniards were the first who armed part of their foot with musquets. At first they were made very heavy, and could not be fired without a rest: they had match locks, and did execution at a great distance. These kinds of musquets and rests were used in England so late as the beginning of the civil wars.

Musquets were first used at the siege of Rhege, in the year 1521.

MUSQUET BASKETS. These are about a foot, or a foot and an half high, eight or ten inches diameter at bottom, and a foot at the top; so that, being filled with earth, there is room to lay a musquet between them at bottom, being set on low breast-works, or parapets, or upon such as are beaten down.

MUSQUETEERS, soldiers armed with musquets; who, on a march, carried only their rests and ammunition, and had boys to bear their musquets after them. They were very slow in loading, not only by reason of the unwieldiness of the pieces, and because they carried the powder and ball separate, but from the time required to prepare and adjust the match: so that their fire was not so brisk as ours is now. Afterwards a lighter kind of matchlock musquet came in use; and they carried their ammunition in bandeliers, to which were hung several little cases of wood, covered with leather, each containing a charge of powder; the balls they carried loose in a pouch, and a priming-horn, hanging by their side. These arms were about the beginning of this century, universally laid aside in Europe, and the troops were armed with flint firelocks.

MUSQUETOONS, a kind of short thick musquet, whose bore is the 38th part of its length: it carries five ounces of iron, or 7 1-2 of lead, with an equal quantity of powder. This is the shortest sort of blunderbusses.

MUSRAL. The noseband of a horse's bridle.

MUSSUK, *Ind.* A skin in which water is carried.

MUSTACHES. Whiskers, worn by the Asiatics, Germans, Russians, and other foreign troops.

MUSTER, in *a military sense*, a review of troops under arms, to see if they be complete, and in good order; to take an account of their numbers, the condition they are in, viewing their arms, and accoutrements, &c.

Muster. This word is derived from the French *mûstrer*, to shew. At a muster every man must be properly clothed and accoutred, &c. and answer to his name. The French call it *appel nominatif*. We call it an *Inspection*.

Musters. By sect. 4th of the British Articles of War, it is enacted, that musters shall be taken of the regiments of life guards, horse guards, and foot guards, twice at least in every year, at such times as shall have been or may be appointed, and agreeably to the forms heretofore used therein.

The musters of every other regiment, troop, or company, in the service, are to be taken at such times, and in such manner, as is directed by the late regulations touching regimental and district paymasters, and the mode of mustering, paying, and settling the accompts of the army.

All commanding officers, and others concerned in the mustering, as well of the regiments of life guards, horse guards, and foot guards, as of the other forces, are enjoined to give the utmost care and attention to the making up of the muster rolls with strict exactness and accuracy.

Every officer who shall be convicted before a general court-martial of having signed a false certificate, relating to the absence of either officer, non-commissioned officer, or private soldier, will be cashiered.

Every officer who shall knowingly make a false muster of man or horse, and every officer and commissary, or muster-master, who shall wittingly sign, direct, or allow the signing of the muster rolls, wherein such false muster is contained, shall, upon proof made thereof, by two witnesses before a general court-martial, be cashiered, and suffer such other penalty as he is liable to by the act for punishing mutiny and desertion.

Any commissary or muster-master, who shall be convicted before a general court-martial, of having taken money, by way of gratification, on the mustering any regiment, troop, or company, or on the signing the muster-rolls, shall be displaced from his office, and suffer such other penalty as he is liable to by the said act.

Every colonel, or other field officer, commanding a regiment, troop, or company, and actually residing with it, may give furloughs to non-commissioned officers and soldiers, in such numbers, and for so long a time, as he shall judge to be most consistent with the good of our service; but no non-commissioned officer or soldier, shall, by leave of his captain, or inferior officer, commanding the troop or company, (his field officer not being present) be absent above twenty days in six months; nor shall more than two private men be absent at the same time from their troop or company, unless some extraordinary occasion shall require it; of which occasion the field officer present with and commanding the regiment is to be the judge.

It is strictly forbidden to muster any person as a soldier who does not actually do his duty as a soldier, &c. See Livery.

Muster-*master-general*, *Commissary-general* of the **Musters**, one who takes account of every regiment, their number, horses, arms, &c. reviews them, sees that the horses are well mounted, and all the men well armed and accoutred, &c.

MUSTER-ROLL, (*état nominatif*, Fr.) a specific list of the officers and men in every regiment, troop, or company, which is delivered to the muster-master, regimental or district paymaster, (as the case may be) whereby they are paid, and their condition is known. The names of the officers are inscribed according to rank, those of the men in alphabetical succession. Adjutants of regiments make out a muster roll, and when the list is called over, every individual must answer to his name. Every muster-roll must be signed by the colonel or commanding officer, the paymaster and adjutant of each regiment, troop, or company: it must likewise be sworn to by the muster-master or paymaster, (as the case may be) before a justice of the peace, previous to its being transmitted to government.

MUSTI. One born of a mulatto father or mother, and a white father or mother.

MUTILATED. In a military sense, signifies wounded in such a manner as to lose the use of a limb. A battalion is said to be mutilated, when its divisions, &c. stand unequal.

MUTINE, *or* **MUTINEER,** a soldier guilty of mutiny.

MUTINY, in a *military sense*, to rise against authority. Any officer or soldier who shall presume to use traitorous or disrespectful words against the president of the United States, against the vice president, against the congress of the United States, or against the chief magistrate or legislature of any of the United States, in which he may be quartered, is guilty of mutiny.

Any officer or soldier who shall behave himself with contempt or disrespect towards his commanding officer, or shall speak words tending to his hurt or dishonor, is guilty of mutiny.

Any officer or soldier who shall begin, excite, cause, or join in any mutiny or sedition, in the troop, company, or regiment, to which he belongs, or in any other troop, or company, in the the service of the United States, or on any party, post, detachment, or guard, on any pretence whatsoever, is guilty of mutiny.

Any officer or soldier who, being present at any mutiny or sedition, does not use his utmost endeavors to suppress the same, or coming to the knowlege of any mutiny, or intended mutiny, does not, without delay, give information to his commanding officer, is guilty of mutiny.

Any officer or soldier, who shall strike his superior officer, or draw, or offer to draw, or shall lift up any weapon, or offer any violence against him, being in the execution of his office, on any pretence whatsoever, or shall disobey any lawful command of his superior officer, is guilty of mutiny. See War.

Mutiny-*Act*, an act which passes every year in the British house of commons, to answer some specific military purposes; and by which the army is continued on a peace or war establishment.

MUZZLE *of a gun or mortar*, the extremity at which the powder and ball are put in.

MUZZLE-RING *of a gun*, that which encompasses and strengthens the muzzle, or mouth of a cannon.

MYRIAD, denotes the number ten thousand.

MYRIARCH. The captain, or commander of ten thousand men.

MYRMIDONS. In antiquity, a people of Thessaly, of whom it is fabled, that they arose from ants, upon a prayer put up to Jupiter, by Æacus, after his kingdom had been depopulated by a pestilence. In Homer, and in Virgil, the Myrmidons are Achilles's soldiers. The term Myrmidon is used in modern times to express any rude ruffian, or hireling assassin; the same as *Hessian*.

MYRMILLONES. A sort of combatants among the Romans, who had on the top of their cask or helmet, the representation of a fish; and in their engagements with the Retiarii, if they were caught and wrapped in the net, it was not possible for them to escape.

MYSORE. An extensive country in the East Indies, which borders on the Carnatic to the S. W. bounded on the East by the south part of the Carnatic, and the district of Tritchinopoly. It extends west within 30 miles of the sea coast of Malabar. Seringapatam was the capital. It was wantonly attacked, taken, and partitioned twice, and at last completely occupied and incorporated with the British conquests.

N

NABOB, *Ind.* a corruption from Nawaub, the plural of naib. The title means a deputy, but it is often assumed in India without a right to it. As the real signification and import of this word is not generally known, we shall extract a passage out of Mr. Orme's History of the Carnatic, that will place them in the clearest point of view:

"Most of the countries which had been conquered by the great Mogul in the peninsula of India, are comprised under one viceroyalty, called from its situation decan, or south. From the word soubah, signifying a province, the viceroy of this vast territory is called soubahdar, and by Europeans sometimes the subah. Of the countries under his jurisdiction, some were entirely subjected to the throne of Delhi, and governed by mahomedans, whom Europeans improperly call Moors; whilst others remained under the government of their original Indian princes or Rajahs, and were suffered to follow their ancient modes on condition of paying tribute to the great Mogul. The Moorish governors depending on the soubah, assumed, when treating with their inferiors, the title of nabob, which (as we have already observed) signifies deputy: but this in the registers of the throne (of Delhi) is synonimous to soubahdar, and the greatest part of those who styled themselves nabobs were ranked at Delhi under the title of phousdar, which is much inferior to that which they assumed. The Europeans established in the territories of these pseudo-nabobs (if we may be allowed the expression) following the example of the natives with whom they have most intercourse, have agreed to give them the title they so much affect.

"A nabob ought to hold his commission from Delhi, and if at his death a successor has not been previously appointed by the great Mogul, the soubah has the right of naming a person to administer the nabobship, until the will of the sovereign is known; but a nabob thus appointed by a soubah was not deemed authentically established until he had been confirmed from Delhi. The soubah received from the several nabobs the annual revenues of the crown, and remitted them to the treasury of the empire. The nabobs were obliged to accompany him in all military expeditions within the extent of his viceroyalty, but not in any without that extent. These regulations were intended to place them in such a state of dependence on the soubah, as should render them subservient to the interests of the empire, and at the same time leave them in a state of independence, which would render it difficult for the soubah to make use of their assistance to brave the throne.

Nobobs, however, often kept possession of their governments in opposition both to the soubah and the throne; and what is more extraordinary in the offices of a despotic state, both soubahs and nabobs have named their successors, who have often succeeded with as little opposition as if they had been the heirs apparent of an hereditary dominion." It is, perhaps, superfluous to observe, that the British have taken the place of the mogul, and that nabobs are made and unmade much more freely and frequently than European kings in modern times.

NABOBSHIP. The office of a nabob. The Carnatic was one of the most considerable nabobships dependent on the soubah of Decan. From its capital it was likewise named the province of Arcot; but its present limits are greatly inferior to those which bounded the ancient Carnatic before it was conquered by the great Mogul; for we do not find that the nabobs of Arcot ever extended their authority beyond the river Gondegama to the north, the great chain of mountains to the west, and the borders of the provinces of Tritchinopoly, Tanjore, and Mysore to the south. The sea bounds it to the east. It was not before the beginning of last century that this country was entirely reduced by the Mahomedans. For further particulars respecting nabobs, see pages 27and 28 in the Dissertation prefixed to the History of the Carnatic.

NACELLE, *Fr.* A small boat that has neither mast nor sail. It is properly called a ferry-boat.

NADIR. In astronomy, is that point in the heavens which is directly under our feet, and is diametrically opposite to the zenith, or point over our heads. The word is pure Arabic, signifying the same thing. The zenith and the nadir are the two poles of the horizon, each 90° distant from it, and consequently each in the meridian.

NAGARA, *Ind.* The drum made from a hollow cylinder of teak wood, and the ends covered with goat skin; it is suspended from the left shoulder to the right side, and beat with a stick made of teak wood.

NAGER, *Fr.* to swim.

Se sauver à la NAGE, to save oneself by swimming.

NAGGUR, *Ind.* The principal drum in Asiatic armies, commonly allowed only to persons of high dignity. The *bass drum.*

NAIB, *Ind.* a deputy. The governor

of a town under a nawaub or nabob is so called in India.

NAIC, *or* NAIK, a subaltern officer in the sepoys; a corporal.

Drill Naic, *or* Naick, a subaltern officer belonging to the native infantry in India, answering to our drill corporal.—Every battalion of native infantry has two drill havildars or serjeants, and two drill-naicks, called *non-effective*, attached to it.

NAILS of various sorts are used in artillery. See Carriage.

Garnish Nails, in *travelling carriages*, have pointed heads like diamonds, with a small narrow neck: they serve to fasten the plates with roses, to cover the side-pieces from the ends of the trunnion-plates to 5 or 6 inches beyond the centre of the carriage.

Diamond headed Nails, small nails, whose heads are made like a flat diamond, and serve to fix the plates upon travelling carriages.

Rose bud Nails, are small round headed nails, driven in the centre of the roses of the plates.

Counter sunk Nails, those that have flat round heads, sunk into the iron plates, so as to be even with the outside of it.

Streak Nails, are those which fasten the streaks to the fellies of the wheels.

Box pin Nails, small nails without heads, to pin the nave boxes to the naves.

Stub Nails, are driven on the outside of the nave hoops, to keep them in their places.

Flat headed Nails, to fasten the locker or any sort of hinges.

Dog Nails, have flat round heads; and one part of the shank next to the head is also round.

To Nail, *spike*, or *cloy*, cannon, *enclouer le canon*, Fr. When circumstances make it necessary to abandon cannon, or when the enemy's artillery are seized, and it is not however possible to take them away; it is proper to nail them up, in order to render them useless; which is done by driving a large nail or iron spike into the vent of a piece of artillery, to render it unserviceable. There are various contrivances to force the nail out, as also sundry machines invented for that purpose, but they have never been found of general use; so that the best method is to drill a new vent.

One Gasper Vimercalus was the first who invented the nailing of cannon. He was a native of Bremen, and made use of his invention first in nailing up the artillery of Sigismund Malatesta.

NAIRS, a native military tribe of the Malabar coast. They affirm that they are the oldest nobility in the world.—Their pride on this supposition is greater than that of Rajpoots. In 1755, the king of Travancore, with the assistance of a French officer, called Launoy, disciplined 12,000 Naires in the method of European infantry.

NAGARKANNA, *Ind.* the place where all the drums and war music are kept.

NAUKODA. A native captain or pilot so called in India.

NANA, *Ind.* the title which is given to a chief of the Marattahs. It more properly signifies the acting head of the government, and general of the forces.

NAPPE *de feu*, Fr. See Jets de Feu.

NARROW, of small breadth.

Narrow *Front.* A battalion, &c. is said to assume a narrow front, when it goes from line into column, upon the safe principles of compression.

The Narrows, an important position on the entrance of the Hudson's river, N. York; strong works are erecting there, at the expence of that state.

The Narrow, a channel which runs between the Margate sands and the Main.

NASIR-JUNG, *Ind.* victorious, or triumphant in war.

NATION, a people; also a country. As the American nation, the French nation. It is more generally used in the first sense; as, *The nation at large seems disposed to resist every attempt that the British may make to reduce us to our former condition of colonies; and to maintain the freedom of the seas.*

National, that which concerns or belongs to a whole nation.

National *troops*, are those raised under the authority of *Congress*, in contradistinction to the *Militia*, which may be called *States troops*, being organized by the several *States*.

NATIVE, in general, denotes a person born in a certain place, but more particularly it refers to the proper residence of the parents, and where the person has his education.

Native *Cavalry*, a body of troops so called in India, in contradistinction to the European regiments. According to the regulations printed at Calcutta in 1797, each regiment was directed to have six troops, consisting of two captains, one captain-lieutenant, six lieutenants, three cornets, two serjeants, six subidars, six jemidars, 18 havildars, 18 naicks, six trumpeters, 420 troopers, six puckallies. The staff consists of one adjutant, one quarter-master, one paymaster, one surgeon's mate, one serjeant-major, one quarter-master serjeant, one drill havildar, one drill naick, one trumpeter-major, six pay-havildars, six farriers, and one native doctor.

Each regiment to be commanded by a field officer.

Native *Infantry*. A body of troops under the immediate direction of the presidency of Bengal, composed of the natives of India. According to the regulations published at Calcutta in 1797, it is directed, that the battalions of native infantry should be formed into regiments of two battalions each, with ten companies in each battalion, the regiment to consist of one colonel, two lieutenant-colonels, two majors, (junior lieutenant-colonel, and junior major, to be without companies) seven captains, 1 captain-lieutenant, 22 lieutenants, 10 ensigns, two serjeants, 20 subidars, 20 jemidars, 100 havildars, 100 naicks, 40 drums and fifes, 1600 privates for Bengal, 1800 privates for Madras and Bombay, 20 puckallies. The staff consists of two adjutants, one paymaster, one surgeon, two mates, one serjeant-major, one quarter-master serjeant, two native doctors, one drum-major, one fife-major, two drill havildars, and two drill naicks.

The peace establishment of these corps was ordered to consist of four regiments, to be commanded by two lieutenant-colonels to the two first, and two majors to the 3d and 4th regiments; a brigade major to be allowed to the cavalry. The whole, when raised, were to be commanded by a colonel commandant. But, at the period mentioned, only two regiments of native cavalry were raised, and twelve regiments of native infantry.

It was further directed, that upon the completion of the native cavalry, the promotions of officers should proceed by seniority in their respective regiments, until they arrived to the rank of captain, and afterwards to rise in the whole corps to the rank of major, and to the command of regiments. The promotion to major, and command of regiments, was subjected to the same principle, as in the infantry, in regard to being unfit. But if field officers of cavalry were superceded in consequence of being unfit to command, they were to be allowed to retire with the pay of lieutenant-colonel of infantry.

The promotions in the native infantry were to take place according to seniority in their respective regiments, to the rank of lieutenant-colonels, and afterwards to colonels, and command of regiments, with the following proviso:

That should the senior lieutenant-colonels appear to the government at the presidency, either upon representation of the commander in chief, or by any other means, to be unfit for the command of regiments, they were to be passed over, and junior officers promoted. But the reasons for such supercession were to be entered on the records, for the information of the court of directors.

The same principle was directed to be applied to the European infantry, to the promotion of officers of artillery to the command of battalions, and of corps; to the chief engineers, to the colonels commandants, and officers to command regiments of cavalry, and to the rank of major-generals from that of colonels.

It was further ordained, that should any captains or subalterns obtain leave from that period to exchange from one regiment to another, they were to come into the regiment to which they were removed as youngest of their respective ranks, according to the practice in the British establishment.

It was also ordered, that each regiment of native cavalry, and native infantry, in the absence of the colonel, should be under the general command of the senior lieutenant-colonel, who was to have the particular command of the 1st battalion, and the junior lieutenant-colonel that of the second battalion.

The same regulation prevails in the Indian, or native corps, with respect to the appointment of paymasters, that exists in the royal service.

About the same period, a very satisfactory regulation took place in favor of the European and native or company's troops, to prevent the growth of much existing jealousy between them and the king's troops. To give every officer of the company a king's commission, of the same date with that which he received from the company, with a retrospect founded on the date of the king's commission they then held, so as to prevent supercession by the various promotions which had recently taken place by general brevet in the British army.

NATURAL FORTIFICATION, consists in those natural obstacles which are found in some countries, and which impede or prevent the approach of an enemy. Thus a place, the avenues to which are easily closed, or which is surrounded by impassable rivers or marshes, is defended by natural fortification.

NAUAB, *Ind.* See Nabob.

NAVAL, *Fr.* This word is used to convey the same meaning among the French that it does with us, viz. *armée navale*, naval armament; *combat naval*, sea fight, or naval combat; *forces navales*, naval forces. It is remarked in the Dictionnaire de l'Academie Francoise, that *naval*, when used in the masculine gender, is not susceptible of the plural number.

Naval *armament*, the fitting out a fleet, with all kinds of provisions and military stores, for actual service.

Naval *camp*, in *military antiquities*, a fortification, consisting of a ditch and parapet on the land side, or a wall built in the form of a semi-circle, and extended from one point of the sea to the other. This was beautified with gates, and sometimes defended with towers, through which they issued forth to attack their enemies. Towards the sea, or within it, they fixed great pales of wood, like those in their artificial harbors; before these the vessels of burthen were placed in such order, that they might serve instead of a wall, and gave protection to those without; in which manner Nicias is reported by Thucydides to have encamped himself. When their fortifications were thought strong enough to defend them from the assaults of enemies, the ancients frequently dragged their ships on shore. Around these ships the soldiers disposed their tents as appears every where in Homer: but this seems only to have been practised in winter, when their enemy's fleet was laid up, and could not assault them; or in long sieges, and when they lay in no danger from their enemies by sea, as in the Trojan war, where the defenders of Troy never once attempted to encounter the Grecians in a sea-fight.

Naval *crown*, in *Roman antiquity*, a crown conferred, among the Romans, on persons who, in sea engagements, distinguished themselves. A. Gellius says, in general, the naval crown was adorned with prows of ships. Lipsius distinguishes two kinds; the first he supposes plain, and given to the common soldiers; the other rostrated, and only given to generals or admirals, who had gained some important victory at sea.

Naval *officers*, are admirals, captains, lieutenants, masters, boatswains, midshipmen, gunners, &c.

Naval *engagement*, implies, in general, either a sea-fight between single ships, or whole fleets of men of war, or gallies, &c.

Naval Tactics, or the art of was carried on by ships at sea; this being limitted to the possibilities of navigation, is therefore much less susciptible of that variety of stratagem which belongs to the hostility of armies on land, and comprehends beside the knowlege of military operation, that of the movement of ships under all circumstances of wind, weather, and also of the structure of ships and rigging

The tactics of the ancients consisted in the formation of position by which they could bear down upon and pierce the sides, or board vessels, and decide the conflict hand to hand; the invention of gunpowder has had the same effect upon naval as upon land tactics, that they can fight without coming to close quarters.

The Dutch, French, and British have been most distinguished for naval tactics; but they have been principally reduced to fixed rules like the armies of modern times, by the French and English. M. Morogues is the most copious author on the subject in modern times. M. Bourde de Villehuet, in his work called *La Manæuvrier*, has also published a most valuable treatise. M Girmoard has treated of the subject as a science.

A Treatise has been published in English by Mr. Clerk, who was not a professional seaman, in which new principles were introduced, and those of the French adopted. The battles of April 1782, and of the Nile and Trafalgar where fought upon the new principles.

NAVE, in *gun-carriages*, that part of a wheel in which the arms of the axletree move, and in which the spokes are driven and supported. See **Wheel**.

Nave-*hoops*, are flat iron rings to bind the nave: there are generally three on each nave.

Nave-*boxes*, were formerly made of brass; but experience has shewn that those of cast iron cause less friction, and are much cheaper: there are two, one at each end, to diminish the friction of the axletree against the nave.

NAVIGATION, the theory and art of conducting a ship by sea, from one port to another, or of disposing and influencing her machinery, by the force of the wind, so as to begin and continue her motion at sea.

NAVIRE *de guerre*, a man of war.

Navire *Merchand*, Fr. a merchantman. It is likewise called *vaisseau merchand*.

NAULAGE, NAULIS, *Fr.* Freight or fare.

Nauliser, *Fr.* to freight or hire a vessel.

NAUMACHIÆ, or sea-fights, are described as early as the time of the first Punic war, when the Romans first initiated their men in the knowlege of sea affairs. After the improvement of many years, they were designed as well for the gratifying the sight as for increasing their naval experience and discipline; and therefore composed one of the solemn shows, by which the magistrates or emperors, or any affectors of popularity, so often made their court to the people. It will be observed from this passage out of Kennett's Roman Antiquities, page 269, that the necessity which Rome was under of fighting Carthage upon her own element, gave rise to their naval manœuvres. But the overgrown empire of the former, and the subsequent corruption of her people, soon converted these powerful auxiliaries to the legions, by whom she had conquered the universe, into instruments of pleasure and debauchery. Lampridius, in the life of the emperor Heliogabalus, relates, that, in a representation of a naval fight, he filled the channel where the vessels were to ride with wine instead of water. A story scarcely credible, though we have the highest conceptions of that wretch's prodigious luxury and extravagance. The frequent threats which the French emperor has put forth, and the similitude which he draws between France and Great Britain to Rome and Carthage, may probably lead to great naexertions.

NAUTICAL *planisphere*, a description of the terrestrial globe upon a plane, for the use of mariners: but more usually called *chart*.

NAVY, implies, in general, any fleet or assembly of ships. It is, however, more particularly understood of the vessels of war that belong to a kingdom or state.

Navy Department of the United States, has the charge of the naval affairs, and of the military marine corps.

Number and Kind of Ordnance for each of the Ships in the British Navy.

Rates.	No. of Guns.	No. of Guns of each Kind.							Carronades.			
		42	32	24	18	12	9	6	32	24	18	12
1st.	100	28	—	28	—	30	—	18	2	6	—	—
2d.	98	—	28	—	30	40	—	—	2	—	6	—
3d	80	—	26	—	26	—	24	4				
	74	—	28	—	28	—	18	—	2	—	6	—
	70	—	28	—	28	—	14	—				
	64	—	—	26	26	—	12	—	—	2	6	—
4th.	60	—	—	24	—	26	—	10	—	—	—	—
	50	—	—	22	—	22	—	6	—	6	—	6
5th.	44	—	—	—	20	22	—	6	—	—	8	—
	36	—	—	—	26	2	8	—	8	—	—	—
	32	—	—	—	—	26	—	6	—	6	—	—
6th.	28	—	—	—	—	—	24	4	—	6	—	—
	24	—	—	—	—	—	22	2	—	2	6	—
	20	—	—	—	—	—	20	-	—	—	—	8
Sloops	18	—	—	—	—	—	—	18	—	—	—	8

Dimensions of Ships, Number of Men, and Draught of Water.

Number of Guns.	Length on the Gun-deck.		Extreme Breadth,		Complement of		Depth of water required for each.
					Sailors	Marines.	
	Ft.	In.	Ft.	In.	N°.	Officers.	Feet.
110	190	—	53	—	875	1 Captain 3 Subalt's.	24
100	186	—	52	—			
98	180	—	50	—	750		23
90	177	6	49	—			
80	182	—	49	6	650		18
74	182	—	48	7			
74	169	—	46	11			
64	160	—	44	6		1 Cap. 2Sub.	
50	146	—	40	6	420	2 Lieuten'ts.	16
44	140	9	38	8	300	1 Subalt.	
38	144	—	39	—			
36	142	—	38	—			
32	126	—	35	4			15
28	120	—	33	6	200		
24	114	7	32	3			
20	108	—	30	—			
18	110	—	29	6	125	Serjeant.	13
16	106	—	28	—			

N. B. The usual complement of Marines is one for every Gun in a British Ship of War.

NAVY-*board*, together with its civil and military departments, in England, consists of a lord high admiral, or lords commissioners for executing this office; one first lord commissioner, and six other lords commissioners, with a number of inferior officers, and clerks.

Navy, is also a collective body of officers employed in the military sea-service.

NAWAUB, *Ind.* See Nabob.

NEAHUT, *Ind.* a deputyship, or lieutenancy: from naib, a deputy.

NECESSARIES, in a military sense, are such articles as are ordered to be given to every soldier.

NEESHUNGPAT, *Ind.* a violent assault without bloodshed.

NEGATIVE. This term is sometimes used to express the result of measures or enterprizes, which though not entirely successful, are not productive of serious or mischievous consequences.—Hence the British expeditions to Spain, and to Walcheren, may be considered as having had *negative success*.

NEGATIVE *Penalties*. Certain laws whereby persons are secluded from military rank, &c. without inflicting any positive pains.

NEGLECT *of* **DUTY**. Officers or soldiers convicted of neglect of duty, are punishable at the discretion of a court-martial.

NEGROES, blacks, moors. The people brought from Guinea, and other parts of Africa, as slaves, and sent into the colonies of America, to cultivate sugar, tobacco, indigo, &c. and to dig in the mines of Peru or Mexico.

NELLI-COTAH, a fort situated about forty miles to the south of Tinivelly, in the East Indies. This fort has been rendered memorable by the manner in which it was carried by the English in 1755, and the barbarity with which a garrison was treated which had not killed a man and had called for quarter, and yet men, women, and children were massacred. The detachment consisted of 100 Europeans, and 300 sepoys, with two field pieces. These troops (to quote Mr. Orme's words in his History of the Carnatic, page 386, book V.) set out at midnight and performed the march in 18 hours: the polygar, startled at the suddenness of their approach, sent out a deputy, who pretended he came to capitulate, and promised that his master would pay the money demanded of him in a few days; but suspicions being entertained of his veracity, it was determined to detain him as a pledge for the execution of what he had promised, and he was accordingly delivered over to the charge of a guard. The troops were so much fatigued by the excessive march they had just made, that even the advanced centinels could not keep awake; and the deputy perceiving all the soldiers who were appointed to guard him, fast asleep, made his escape out of the camp, and returned to the fort; from whence the polygar had sent him only to gain time, in order to make the necessary preparations for his defence. This being discovered early in the morning, it was determined to storm the place, of which the defences were nothing more than a mud wall with round towers. The troops had not brought any scaling ladders, but the outside of the wall was sloping, and had many clefts worn in it by the rain, so that the assault, although hazardous, was nevertheless practicable. It was made both by the Europeans and the sepoys with undaunted courage, in several parties at the same time; each of which gained the parapet without being once repulsed, when the garrison retired to the buildings of the fort, where they called out for quarter; but the soldiers, put all they met to the sword, not excepting the women and children; suffering only six persons, out of four hundred, to escape alive: shameful to relate, the troops and officers who bore the greatest part in this shocking barbarity, were the bravest of Englishmen, having most of them served under colonel Lawrence, on the plains of Tritchinopoly: but those who contemplate human nature will find many reasons, supported by examples, to dissent from the common opinion, that cruelty is incompatible with courage.

NESHAUNBURDAR, *Ind.* an ensign.

NETHERLANDS, that part of modern France which lies next to the North sea; it was once called the circle of Burgundy, and sometimes the Low Countries, so called from being situated between France, Lorrain, Germany, and the ocean.

They were formerly divided into 17 provinces, four of which were dukedoms, viz. Brabant, Limburg, Luxemburg, and Guelderland; seven were earldoms, viz. Flanders, Artois, Hainault, Holland, Zealand, Namur, and Zutphen; and five Baronies, viz. West Friezland, Mechlin, Utrecht, Overysell, and Groningen.

These were originally governed by distinct lords or princes, but were all united under Philip the good, duke of Burgundy, who left them to his son Charles, surnamed the Hardy, who being killed at Nancy, in 1477, the 17 provinces fell to his only daughter, Mary of Burgundy, who by marrying with Maximilian the First, of Germany, carried them into the house of Austria.

The kings of France claimed a right to Artois, Flanders, &c. In the reign of king Philip II of Spain, William of Nassau, prince of Orange, and several other discontented noblemen, gave beginning to those disturbances which terminated in the separation of Holland, and the other countries known by the name of the *United Provinces*, occasioned by the dread of the inquisition, the insupportable rigor of the government of the Duke of Alva, and the violent encroachments of the Spaniards upon the liberties and privileges of the countries.

The Netherlands, comprehending Holland, have undergone material alterations during the progress of the French Revolution. Brabant and Flanders, which belonged to the house of Austria, have been annexed to France, and form several of its departments. Holland, upon the expulsion of the Stadtholder, was allowed to call itself an independent country, in alliance with France; but the British co-operating with the adherents of the Stadtholder, exposed it to repeated invasions, to put an end to these conspiracies, after twice expelling the English, the government was changed, and it is now distinguished by the name of the Batavian kingdom.

NETTOYER *les Magazins*, Fr. in artillery, signifies to remove the different pieces of ordnance, for the purpose of having them carefully examined, &c. and to have the stores and ammunition so arranged as not to receive damage. This duty is generally performed by small parties of soldiers, under the command of serjeants, who are detached from the different guards of a garrison town. In the old French service the *commissaire d'artillerie* superintended the execution of this necessary duty, and the soldiers who were employed, got relieved from any further attendance as part of the guard, the instant their work was done.

Nettoyer, *ou enfiler*, Fr. to scour or enfilade.

Nettoyer *la courtine*, Fr. to scour, or fire through the whole extent of the curtain.

Nettoyer *le rampart*, Fr. to scour the rampart.

Nettoyer, *le tranchée*, Fr. to scour or clear the trenches. This is effected by means of a vigorous sally which the garrison of a besieged place make upon the besiegers; when they beat in the guard, drive off the artificers and workmen, level the parapet, break up and choak the line of circumvallation, and spike or nail the cannon.

NEUTRAL, neither of the one nor the other.

Neutralite, *Fr.* See Neutrality.

Garder la **Neutralite,** *Fr.* To be neutral.

Accorder la **Neutralite,** *Fr.* To allow others to be neutral, or to grant neutrality.

Observer la **Neutralite,** *Fr.* To observe a strict neutrality.

Violer la **Neutralite,** *Fr.* To violate the laws of neutrality.

Demeurer dans la **Neutralite,** *Fr.* To remain in a state of neutrality.

Neutrality. The state or condition of one who is neuter, a middle condition between a friend and an enemy. In a military sense, remaining strictly indifferent, whilst other powers are at war, without assisting any party with arms, ammunition, or men. When a country, calling itself neutral, furnishes a quota or contingent to any nation that is at war with another, it cannot be said to observe the strict laws of neutrality. Of all precarious and difficult situations that perhaps is the most so, in which a weak nation is placed when two powerful nations wage war on each side, and the exact laws of neutrality are expected to be observed by the intermediate country. Bayle speaking of neutrality, humorously exclaims, *heureux les pacifiques quant a l'autre monde, mais dans celui-ci, ils sont misérables*: happy are the peaceable with respect to the next world, but they are miserable in this! in trying to derive advantages from the dissensions and broils of others, they insensibly become the victims of both parties. The French writer humorously says, *Ils veulent être marteaux, cela fait que continuellement ils sont enclumes à droite et à gauche*: they would fain be hammers, instead of which they become anvils, and get beaten both right and left. This happened to the Venetians in 1701, who endeavored to remain neutral during the campaigns that took place between the French and the Imperialists. The Danes afford another illustration of the inefficacy of a neutrality without power to resist, the destruction of Copenhagen, and the plunder of their navy, is an atrocity unparalleled. The treatment experienced by the United States, is only inferior to the barbarity exercised against Denmark. Genoa, Florence, Holland, and Switzerland were all forced from their neutrality by England, and fell victims. The observance of a strict neutrality is unquestionably a matter of extreme difficulty, and requires uncommon ability. Few princes possess those qualities of the head and heart that distinguished Hieron king of Syracuse, who so dexterously managed his neutrality in the war between Rome and Carthage. His subjects were considerably benefited by the conduct he observed, whilst his own reputation was not a little increased by the sound policy that dictated it.

Armed **Neutrality.** The depredations committed by the naval force of Great Britain, during the first years of the American revolution, excited a general indignation among the maritime powers of the north of Europe. A project said to be devised by Dr. Franklin, and suggested to the count de Vergennes, was communicated to the courts of Russia and Prussia, and taken up with the zeal of a patron by the empress Katherine of Russia, the result was, that in the year 1780, Russia, Prussia, Sweden, and Denmark, had entered into engagements to arm their fleets, in order to support the neutrality of their commerce; Holland was invited, and consented to engage, but was attacked by Great Britain by surprize before she had ratified the agreement; the other neutral nations were brought to engage in it, and Great Britain was under the necessity of recognizing the principles of the armed confederacy. This event, novel in history, was productive of signal advantages to neutral nations; it formed a new epocha in maritime history, and wrested from England the audacious usurpation of the sovereignty of the seas.

The principles of the armed neutrality were again resumed during the French revolution; but the British, by employing corruption in the northern cabinets, procured the assassination of the emperor Paul of Russia, and at the same time brought a large fleet before Copenhagen which they bombarded, in consequence of which Russia was brought into the war, and Denmark obliged to bend to circumstances. Sweden was already a party in the war.

During the progress of the French revolution, instances have occurred in which a wise neutrality might have been made productive of great national good. But, alas! there are few statesmen, who have ability or political virtue enough, to resist the intrigues or views of those cabinets, who being themselves involved in war, leave nothing untried to drag their neighbors into the same troubled state. Montesquieu has observed, with his usual good sense, that nations seldom know how to avail themselves of natural advantages. What becomes a matter of hard necessity in one country, is frequently found to exist in another, from crooked and interested policy, or from ignorance in administration. Some countries are calculated to be neutral; some to avail themselves of insular situations; and to impose by maritime operations; and others, to make up for the natural disadvantages of continental position, by means of standing armies.

It has been remarked, (with what justice we leave politicians to determine) that no power, being or affecting to be neuter, should be allowed to arm itself, because it is impossible to have perfect confidence in a quarter from whence hostilities may commence according to the exigency of circumstances, (so properly called by the French, *la force des circonstances;*) or the alluring prospects of ambition.

It is more than probable, that the armed confederacy of the north sprung originally from a secret understanding with the agents of France, and manifested itself more strongly on the declaration of Russia. Great Britain of course took the alarm; and, as a French writer very justly observes on the subject of armed neutrality, has sent her fleets, to ascertain the point at the gates of Copenhagen.

The second expedition of the British against Copenhagen is one of the most extraordinary in the annals of the world. The pretence set up is best expressed in the language of *Jackson*, the agent of England in this unprecedented outrage—these are his words. "In the present disturbed state of the continent of Europe it was impossible to distinguish any longer between a *neutral and an enemy*, but by her becoming an ally or an open foe. That something therefore was required beyond an ordinary presumption of the real disposition of every state; and that whilst the influence of an implacable enemy predominated over every power within his reach, (France is alluded to) and either checked or converted into immediate hostility every engagement or inclination unfavorable to his interest, it was impossible to consider the *ordinary covenants* (that is the law of nations and treaties,) *of any neutral nation* either as a sufficient security for her own independence, or of those who confide in her neutrality. It becomes the duty of England, therefore, to discriminate in these circumstances between rights paramount and invariable, binding upon all states, and rights which might be suffered to relax and yield to that state of expediency in which a certain course of measures might involve the existence of a nation."

Such was the detestable and odious sophistry which might be as well applied to cover and excuse any other species of atrocity, and which was followed by the bombardment and conflagration of Copenhagen, the murder of its citizens, and the seizure and plunder of its fleet and naval arsenal. *La loi des plus forts*, or the law of the strongest, so often tramples down national rights, that necessity drives those to the adoption of questionable measures, who would otherwise remain strictly neutral; whilst others again, from being contiguous to contending armies, resort to various pretences, in order to remain in an armed condition for the purpose of taking advantage at a critical moment. Of this description was the system of armed neutrality which Pope Leo X. is recorded to have pursued. When Francis I. king of France, was engaged in a war with the Swiss Cantons, respecting the Milanese, his holiness resolved to remain neuter, or at least affected to be so, although he was strongly invited by both parties to take an active and decisive part. He drew his troops towards the frontiers of the Milanese, under a pretext of covering the ecclesiastical states, but in reality for the purpose of being at hand when the two armies should come to a decisive engagement, of unexpetcedly falling upon the victorious army at the close of an obstinate and bloody battle, of driving it out of Italy, becoming master of Lombardy, and finally establishing himself as the arbiter of the country. But all these imaginary triumphs of the Pope soon disappeared— His troops, which had already reached the frontiers of the Milanese, no sooner learned, that the Swiss had been totally routed by the French, than they were panic-struck, and dispersed in the greatest disorder, as if they were conscious of being engaged in a crooked and illegal cause.

Ancient history affords us several examples of this species of neutrality. During the civil wars between the adherents of Vespasian and those of Otho and Vitellius, various means of duplicity were resorted to. We likewise read of the same sort of conduct having been observed by the inhabitants of Corcyrus when they went to war with the Corinthians; and modern history is full of similar instances of specious neutrality. For further particulars on this interesting subject, especially on the conduct to be observed by neuters in war, see from Page 531 to 533, of the English Translation of Hugo Grotius.

NICK NAME, *(Sobriquet, Fr.)*. A surname, which is used in ridicule or good humor, to distinguish an individual—Nicknames among military men are familiarly used in a collective sense. Thus the light infantry are called *Light Bobs*, the grenadiers *Tow Rows*, and the battalion-men *Flat Foots*; and in many instances whole corps have been particularized in this manner. The 28th of foot were familiarly called the *Slashers*; and a general Sir C. Grey, an officer in the British service, used to be nicknamed General *No-Flint*, from a circumstance which occurred during the American war, when he commanded a party which stole into an American camp at night, and instead of fighting like a soldier, assassinated the Americans while asleep. During the campaigns of 1793 and 1794, in Flanders, &c. the 15th regiment of light dragoons were called *Young Eyes* by the guards, who received or rather gave themselves the nick-name of *Old Eyes*.

NIGHER, *Ind.* any fortified city, measuring at least eight coss, or eight English miles, in length and breadth.

NIQUIBS, *Ind.* men whose military functions among the sepoys, correspond with those of corporals in the king's service.

NITHING, a coward, or poltroon.

NITRE, See *Salt Petre*, *Gunpowder*.

NIVEAU, *Fr.* A level.

Niveau *de la campaign*, Fr. the level surface of a country is so called, in contradistinction to the talus or slope of any rising ground.

De Niveau, *Fr.* level, even.

Niveau *d'eau*, Fr. a water level.—This instrument is extremely simple, and of great use to engineers in the construction of works.

Niveau *de charpentier*, Fr. a carpenter's rule or level.

Niveau *de paveur*, Fr. a pavior's level.

NIVELER, *Fr.* to level.

Niveler *les eaux*, Fr. to find the true level for conveying water.

Niveler *le terrein*, Fr. to find the true level of ground, and to ascertain the relative elevations of places.

Niveleur *Fr.* a leveller: it is likewise sometimes used to express a trifler; but it does not signify a leveller in the political sense which we apply the English word in these days; nor does it mean a *Leveller* belonging to a set of people in Oliver Cromwell's army, who were for having an equal share in the administration of the government between the nobility and the commons.

NIZAM, *Ind.* a title which was bestowed by the great Mogul on one of his principal officers on his being appointed to the command and administration of a province. It became the title of an independent prince who ruled over Golconda about the year 1790; the British now rule over him. The word means, an adjuster, a regulator, an arranger, or manager, &c.

Nizam *ul Moolc*, *Ind.* the protector of the country.

NIZAMUT, the office of Nizam.

NOBILITY, from the Latin, *Nobilitas*. This word has been variously defined. It is, however, generally understood to signify *illustrious descent*, and *conspicuousness of ancestors*, with a succession of arms conferred on some one (and from him to his family) by the prince, by law, or by custom, as a reward for the good and virtuous actions of him that performed them. The only true purchase of nobility should therefore consist of great and good actions, which in proportion as they dignified and ennobled the original owner, become objects of important trust with every descendant; who either reflected them back by a laudable imitation, or shamefully abused the tenure by dishonorable practices. The futility of hereditary nobility is now universally acknowleged.

Nobility likewise means in Europe, a quality that dignifies, or renders a person noble: particularly that raises a person possessed of it above a peasant or a commoner. The quality or degree of a nobleman; also the whole body of noblemen separated from the commons.

Nobility also means name, reputation, renown. N. Bailey in his fourth edition of the New Universal Etymological Dictionary, has the following curious passages on this word:—

Nobility. The Italians thus satyrised nobility: the dukes and earls of Germany, (every son of a duke being a duke, and every daughter of a dutchess being a dutchess) the dons of Spain, the monsieurs of France, the bishops of Italy, (every city having a bishop) the nobility of Hungary, the lairds of Scotland, the knights of Naples, and the younger brethren of England, make all together a poor company. He then classes nobility under five specific heads, viz.

Divine Nobility, which is also called heavenly, or theological nobility, and relates to the supposed original of the soul.

Human or worldly Nobility, which regards blood, and a genealogy of many ancestors. This nobility is purely accidental, and depends upon the birth.—This is called political or hereditary, and becomes the right of individuals, be their merit, virtue, or capacity what they may.

Moral Nobility, refers only to virtue, is purely personal, and depends on our own free will. It is also called *philosophical*; but is not hereditary, except by the influence of example, which render it the general inheritance of all good men.

Dative Nobility, is such as has been acquired by some merits, or deeds, and has been conferred by the prince, &c.

Native Nobility, is what passes from father to son, and makes the son noble, because his father was so. Of this species of nobility consists the British house of lords; to which occasional additions are made by purchased peerages. The justly celebrated Thomas Paine has characterised the futility of what is called *nobility* by a happy pun, calling them *no-ability*.

NOBLES, NOBLEMEN, } are the grandees of any kingdom or nation, by whatsoever title they are distinguished. Honorary distinctions have been very ancient. The Greeks distinguished their people into three ranks, viz. *Noblemen*, *land-holders*, or *farmers*, and *tradesmen*. The first were indulged with great privileges, and wore the figure of a grasshopper, as a badge of honor, in their hair. The Romans wore a half moon upon their shoes.

Among the Romans, those persons were called nobles who preserved the statues of their ancestors in their courts or cabinets. The faces of these statues were painted to resemble life. But it was necessary to be descended from the ancient magistrates, called curules, to be entitled to have these statues. They were exhibited to the public on festival days, and when any of the family died, they were carried in solemn procession before the corpse: so that under these circumstances, an individual might be a patrician without being actually of noble blood or extraction.

That person was called noble in France, who first received a letter patent constituting him such, and who thus gave rise to the nobility of his descendants. Those born of him bore the title of *gentilhomme*, or gentleman, *Un ancien gentilhomme*, or gentleman of some standing, was stiled *homme de condition*, or a person of condition. Those gentlemen who were descended from illustrious houses were called, *men of quality*, *gens de qualité*.

In England those only are called nobles or noblemen, who have the title of duke, marquis, earl, viscount, lord or baron; which titles either descend to individuals from family-right, are gratuitously conferred upon them by the prince, (who is called the fountain of honor) or are obtained by the price of gold. The hereditary tenure becomes equally solid in all these instances, though not equally estimable, unless the title be itself ennobled by some great and good actions of the possessor. By those, and those only, can a purchased title be converted into sterling gold from base metal.

NOBLESSE. See NOBILITY.

NOBLESSE *militaire*, Fr. Military nobility. Although most of the orders may be considered as appendages which confer a species of military nobility, especially that of the British garter, which was instituted by king Edward III. on the 19th of January, 1344, yet the British cannot be strictly said to have among them, that species of military nobility or distinction that was peculiarly known in France, &c. under the immediate title of *noblesse militaire*. In order to reward military merit, an edict was issued by the French court at Fontainbleau, in November 1750, and enregistered on the 25th of the same month by the parliament of Paris, whereby a *noblesse militaire*, or military nobility, was created; the acquisition of which depended wholly upon martial character, but did not require any letter patent for the purpose of ennobling the individual.

By the first article of this perpetual and irrevocable edict, as it was then stated, it was decreed, that no person, serving in the capacity and quality of officer in any of the king's troops, should be liable to the land or poll tax, so long as he continued in that situation. 2dly. That by virtue of this edict, and from the date thereof, all general officers, not being otherwise ennobled, but being actually and bonâ fide in the service, should be considered as noble, and remain so, together with their children born, or to be born in lawful wedlock. 3dly That in future the rank of general officer should of itself be sufficient to confer the full right of nobility upon all those who should arrive at that degree of military promotion; and that their heirs and successors, as well as their children, actually born and lawfully begotten, should be entitled to the same distinction; and that all general officers should enjoy all the rights and privileges of nobility from the date of their commissions. In articles IV. V. VI. and VII. it was specifically provided upon what conditions those officers, who were not noble, and were inferior in rank to that of maréchal de camp, but who had been created chevaliers or knights of the royal and military order of St. Louis, and who should retire from the service after having been in the army during thirty years without intermission, were to be exempted from the payment of the land or poll tax, and how the same privileges was to be transferred to their sons, provided they were in the service. By the eighth article it was enacted, that those officers who had risen to the rank of captain and were chevaliers or knights of the order of St. Louis, but who were disabled by wound, or diseases contracted in the service, should not be obliged to fill up the period of thirty years as prescribed in the recited articles. By article IX. it was provided, that when any officer, not under the rank of captain, died in the actual exercise of the functions, or bearing the commission of captain, the services he had already rendered should be of use to his sons, lawfully begotten, who were either in the service or were intended for it.

It was specified in articles X. and XI. that every officer, born in wedlock, whose father and grandfather had been exempted from the land or poll tax, should be noble, in his own right, provided he got created a chevalier or knight of St. Louis, had served the prescribed period, or was entitled to the exemption mentioned in article VIII. that if he should die in the service, he would be considered as having acquired the rank of nobility, and that the title so obtained should descend, as matter of right, to the children, lawfully begotten, of such officers as had acquired it. It further specified, that even those who should have been born previous to their father's being ennobled, were entitled to the same privilege.

Article XII. pointed out the method by which proofs of military nobility were to be exhibited in conformity to the then existing edict.

Article XIII. and XIV. provided for those officers, who were actually in the service at the promulgation of the edict, in proportion as the prescribed periods were filled up. This provision related wholly to the personal service of officers; as no proof was acknowleged or received, relative to services done by their fathers or grandfathers, who might have retired from the army, or have died prior to the publication of the edict.

The XVth, or last article, was a sort of register, in which were preserved the different titles that enabled individuals to lay claim to military nobility.

The whole of this edict may be seen, page 206, in the 3d volume, *Des Elémens Militaires.*

The French emperor Bonaparte has instituted an order of nobility called the *legion of honor*, the political influence of which appears to be greater than any order ever established, even than that of the Jesuits. He has also adopted the ancient military title of *duke;* which he has hitherto conferred only on men who have merited renown by their military greatness. The title of *count* is also established, and all the members of the legion of honor hold a rank corresponding with the knights of feudal institution. Private soldiers and tradesmen, for acts of public virtue, have been created members of the legion of honor.

NOEUD *de l'artificier*, Fr. a particular knot which artificers or fireworkers make use of to bind fusees together.

NOEUD *de charrue*, Fr. a particular knot or stress, which is used in the artillery when ropes are passed under carriages, for the purpose of raising any piece of ordnance that has been overturned. For the various knots used in military service, see the *Am. Mil. Library*, Art. ARTILLERY.

NOMADES, a tribe of wandering Arabs, so called in Asia.

NOMINAL, by name. Hence

NOMINAL *Call*, which corresponds with the French *appel nominatif;* and, in a military sense, with our *roll call.*

NOURRICE, *Fr.* a nurse. A female who attends the sick. This word is likewise used by the French to express the means of subsistence, &c. which are supplied by the agricultural part of a kingdom. Hence *une province est la nourrice d'une ville;* the town is fed by the country round it. *La Sicile est la nourrice de Rome.* Sicily is the nurse of Rome; meaning thereby that the latter was supplied with corn, &c. by the former.

NOURRIR. To feed. The French say familiarly, *la soupe nourrit le soldat;* broth feeds the soldier.

NOYAU, *Fr.* in English *mandril*, a long piece of iron, which is placed in the middle of a cannon mould, in order that the liquid metal may be poured round it, and the piece obtain an equal thickness on all sides.

NOYAU, *Fr.* likewise means the whole of the vacant space or bore of a cannon, under which are comprehended the diameter of the mouth, the vacant cylinder, the breech, and the vent.

With respect to bombs, grenades, and hollow balls, that which is called *noyau* consists of a globular piece of earth, upon which the cover of bombs, grenades, and hollow balls, is cast. The metal is poured in between this cover and the *noyau*, after which the *noyau* or core is broken, and the earth taken out.

NOWARRA, *Ind.* An establishment of boats, which is kept at Dacca, for a defence against the *Decoits*, *Mugs*, and other plunderers.

NUDDEE, *Ind.* The name for a rivulet.

NULLA, *Ind.* This term likewise signifies a rivulet, and means the place which was once the bed of a river.

NUMEROS, *Fr.* round pieces made of brass, or other metal, which were numbered and used in the old French service in the detail of guards. See MARON.

NURSE. A person, generally a female, whose whole business is to attend the sick in the general or regimental hospital. She is under the immediate direction of the surgeon, whose duty will be to prepare the slops and comforts for the sick, and occasionally to assist in administering medicines, cooking the victuals, washing, &c. and for every ten men confined to bed by fever, an additional nurse and orderly-man should be allowed. All the patients, who are able, are every morning and evening to assist in cleaning and airing the hospital, carrying away dirt, &c, and by every means to assist the helpless.

There are also serjeants, orderly-men, and nurses, in regiments of the line.

In every regimental hospital, a room should be appropriated to the accommodation of such convalescents, whose state of health will admit of their being placed on full diet. This hospital to be regularly visited by the surgeon once, twice, or oftener in the day, as circumstances may require.

A non-commissioned officer should be appointed to the particular charge of the convalescent hospital, with an orderly-man, and when the convalescents are numerous, more orderly-men are to be attached to it, to keep it clean.

It is particularly necessary that none of the hospital tables and orders, which are to be hung up in a conspicuous place in every regimental hospital, shall be defaced by any person whatever, nor taken down, but by the surgeon or serjeant, the latter of whom will explain the allowance ordered for those patients who are not themselves in a situation to read the table for the distribution of diet.

O

O. This letter is generally used in the orderly books to signify orders, viz.

Gl. O. General orders.
R. O. Regimental orders.
Gn. O. Garrison orders.
B. O. Brigade orders.

OATH, a solemn asseveration made in the presence of a magistrate, and taken on the Bible, whereby an individual binds himself to observe certain conditions, or swears to specific facts which he knows of his own knowlege. Soldiers from time immemorial have been accustomed to take oaths of fidelity. These oaths were, however, observed with greater solemnity among the ancients than they are administered in modern armies, except upon very particular occasions. In the latter, indeed, it seldom or ever happens, that oaths are taken by bodies of soldiers, assembled for the purpose. Oaths are taken by men newly enlisted, but those oaths are individually administered, and separately taken. The military oath, on the contrary, among the Romans, was of a more general and impressive nature. Kennett, in his Roman Antiquities, page 188, gives the following account of it:—"The levies being finished, the tribunes of every legion chose out one whom they thought the fittest person, and gave him a solemn oath at large, the substance of which was, that he should oblige himself to obey the commanders in all things to the utmost of his power, be ready to attend whenever they ordered his appearance, and never to leave the army but by their consent. After he had ended, the whole legion, passing one by one, every man, in short, swore to the same effect, crying, as he went by, *Idem in me.* The same by me.

OATH *of Allegiance.* See Allegiance.

OATS, a grain which constitutes a principal food of horses in Europe. The distribution of this article ought to be narrowly watched by every officer commanding a troop; since it is notorious, that government is frequently charged for quantities which are not delivered, by which means, the horse suffers, and the public are imposed upon.

OBEDIENCE, (*Obéissance*, Fr.) Submission to the orders of a superior. The first principle which ought to be inculcated and impressed upon the mind of every officer and soldier is obedience to all lawful commands. It is the main spring, the soul and essence, of military duty.

Preter obeissance, Fr. To swear allegiance.

Remettre dans l'obeissance, Fr. To recall to duty.

OBEDIENCE *to orders.* An unequivocal performance of the several duties which are directed to be discharged by military men. All officers and soldiers are to pay obedience to the lawful orders of their superior officers.

OBEIR, *Fr.* See Obey.

To Obey, in a military sense, is without question or hesitation, to conform zealously to all orders and instructions which are legally issued. It sometimes happens, that individuals are called upon (by mistake, or from the exigency of the service) out of what is called the regular roster. In either case they must cheerfully obey, and after they have performed their duty, they may remonstrate.

OBJECT, in a military sense, signifies the same as point, with respect to mere movements and evolutions Thus in marching forward in line, &c. the leader of a squad, company, or battalion, must take two objects at least upon which he forms his perpendicular movement, and by which the whole body is regulated. In proportion as he advances he takes care to select intermediate and distant objects or points by which his march is governed. See Marching in Line.

OBLATE, any rotund figure flatted at the poles as a turnip; which is properly an *oblate spheroid.*

OBLIQUATION, } a deviation from
OBLIQUITY, } the parallel or perpendicular line.

Oblique, *or second flank.* The face of a bastion discovered from a part of the curtain, is so called.

OBLIQUE *projection*, is that wherein the direction of the striking body is not perpendicular to the body struck, which makes an oblique angle with the horizontal line.

OBLIQUE *deployments.* When the component parts of a column that is extending into line, deviate to the right or left, for the purpose of taking up an oblique position, its movements are called oblique deployments. This is thus executed, either by wheeling the line by quarter or half wheels toward the point directed in single files, sections, or platoons; so that the movement may be made perpendicular to the newly wheeled front, and the sections will form echellons; if files, they march by what is called the line of science.

OBLIQUE *fire or defence*, that which is under too great an angle, as is generally the defence of the second flank, which can never be so good as a defence in front. See *Oblique Firing*, at the word Firings. See *Am. Mil. Lib. plates.*

Oblique *percussion*, is that wherein the direction of the striking body is not perpendicular to the body struck, or is not in line with its centre of gravity.

OBLIQUE *position*. A position taken in an oblique direction from the original line of formation. As described in oblique deployments.

OBLIQUE *radius*, a line extending from the centre to the exterior side of a polygon.

OBLIQUE STEP. This absurd and awkward contortion is deservedly exploded.

To OBLIQUE, in a military sense, is to move forward to the right or left, in either of those directions, from a line.

Pas OBLIQUE, *Fr.* Oblique step.

OBLIQUE *à droite*, Fr. Right oblique.

OBLIQUE *à gauche*, Fr. Left oblique.

Feux OBLIQUES *à droite et à gauche*, oblique firings to the right and left.

Marcher OBLIQUEMENT, *Fr.* To oblique, or march in an oblique direction.

OBLIVION. See AMNESTY.

OBLONG *Square*. See SQUARE.

OBSEDER, *Fr.* To besiege, to beset, to get possession of.

OBSEQUIES, (*Obséques*, Fr.) See BURIALS.

OBSERVATION. See ARMY OF OBSERVATION.

To be under OBSERVATION. To be carefully watched and looked after. *Etre vu de prés ; etre suivi de prés.*

OBSERVATOIRE, *Fr.* See OBSERVATORY.

OBSERVATORY, a building, public or private, which is erected and provided with all sorts of instruments, proper for astronomical observations, &c. The most noted observatories in Europe, are:

1. That of Tycho Brahe, a nobleman of Denmark, at Uraineberg, in the island of Wern, between the coasts of Schonen and Zealand, in the Baltic.

2. The observatory at Paris, which was erected by Louis XIV. This building stands in the Fauxbourg St. Germain, and is so constructed as to answer the four cardinal points of the world, east, west, north and south. The foundation is laid 80 feet below the ground, and the edifice carried as much above it. It contains three stories in height, and has a terrace at top, from whence the whole horizon appears flat. The stair-case of this observatory deserves notice, from the singularity of its construction, being in the form of a screw, and so contrived, that from the bottom there is a full sight of the stars that pass the zenith of this place.

3. The royal observatory at Greenwich, in England, which was founded by Charles the second.

4. The observatory at Pekin in China, which was erected by the late emperor, at the intercession of the Jesuits.

To OBSERVE, to watch closely, &c. Hence, *to observe the motions of an enemy*, is to keep a good look out by means of small corps of armed men, or of intelligent and steady spies or scouts, and to be constantly in possession of his different movements. No man can be said to have the talents of an able general, who neglects to observe his enemy in all directions; for if it be his intention to attack, you may thwart him by previous manœuvres; and if you are liable to be attacked yourself, you may assume the best possible position, and prevent surprise, &c.

OBSESSION. The act of besieging.

OBSIDIONAL, belonging to a siege.

OBSIDIONAL *Crown*, (*couronne obsidionale*, Fr.) a crown so called among the ancient Romans, which was bestowed upon a governor or general, who by his skill and exertions, either held out, or caused the siege to be raised of any town belonging to the republic. It was made from the grass which grew upon the spot, and was therefore called *gramineus*, from the Latin word *gramen*, signifying grass.

Monnoie OBSIDIONALE, *Fr.* any substitute for coin, which has a value put upon it that is greater than its intrinsic worth; and a currency given, to answer the convenience of the inhabitants of a besieged place. *On a employé le cuir à faire des monnoies obsidionales.* The inhabitants made use of leather as a substitute for coin

OBSTACLES, in a military sense, are narrow passes, woods, bridges, or any other impediments, which present themselves when a battalion is marching to front or rear. These are passed, by the formation, march, and deployment of the close column. Such parts as are not interrupted still move on in front; such parts as are interrupted, double by divisions, as ordered, behind and adjoining a flank or flanks, and in this manner follow in close column in their natural order. As the ground opens they successively deploy, and again perfect the line. The columns are always behind the line, and march closed up. The formed part of the battalion, whether advancing or retiring, continues to move on at the ordinary pace, and in proportion as the obstacles increase or diminish, will the formed or column parts of the line increase or diminish.

The general attentions directed to be observed on these occasions are, that the columns formed shall be of sub-divisions, if the ground will admit. The first subdivision that is obliged to double, will be directed to which hand by the commander of the battalion, the others, as they successively double, will, in consequence, place themselves behind it, and behind each other, and the hand first doubled to, will be that which presents the opening most favorable to the subsequent march, and formation, and which the commanding officer will always hold in view, and order accordingly. The interrupted body will double to one or both flanks, according to circumstances, and the order it receives. Obstacles that impede a flank will occasion a single column to be formed from the flank towards the centre.—Obstacles that impede the centre, or a central part of a wing, will, if considerable, occasion two columns to be formed, from the centre towards the flanks. The columns will follow a flank of such part of the line as is not impeded; and either in doubling into column, or extending into line, the rear divisions will conform to the movements of their then leading one. No part less than the front of the column doubles or moves up, and when half or more of a battalion must be thrown into one column, it will be ordered by companies.

Obstacles *whose fronts are parallel to the line.* When such occur, the divisions impeded must all at once double behind such one, or two, other divisions as clear them of the obstacle.

Obstacles *whose first points continue to increase as the line advances.* In these cases the doubling is successive, beginning with that division which is first interrupted, and continuing as it becomes necessary, till the column can advance in clear ground.

Obstacles *passed, or diminished.*—When obstacles are of such a nature as to permit of the complete extension at once into line: the whole column performs it by the commands and deployments of the close column on the front division, which then makes part of the line. But when obstacles diminish by degrees only, then the divisions of the column must come up into line successively as the ground opens, and the remainder of the column must, in diminishing, shift toward the obstacle, in the same manner as it before shifted from it in increasing.

Obstacles *that are passed in presence of an enemy.* Under these circumstances if the battalion, in advancing, should be obliged to fire, it halts in the situation it is then in, executes such firings as are ordered, and again advances.

If the battalion, in retiring, is pressed by the enemy, the part in line will *halt! front!* the part in column will move on till the last division arrives in line, and will then *halt, front.* The firing that is ordered, will be executed; and when it is again proper to retire, the whole will face about, the part in line will *march*, and the columns will also be put in march when the line arrives at their head.

Obstacles *whose points of opening are narrow, and continue so, more or less.* In such cases the interrupted division, will be ordered to face either to one or both flanks, and closely to follow in file such parts of the battalion as are not broken: the filing will increase as the obstacles increase, but as they diminish, file after file will successively and quickly move up to their place till the whole are again formed; and during this operation the leading file will always remain attached to the flank of the part in line.—The same rules that direct the doubling in column, direct the doubling by files; when a subdivision files, it will be from the flank only; when a company files, it may be from both flanks; and if a larger front than two companies is interrupted, it then doubles into column. Where the obstacles are of small extent, but frequently occurring, this mode is the readiest that can be applied in advancing; but in retiring it cannot be of use, if the enemy be at hand to press upon the battalion; and therefore the passing by column is to be looked upon as the general method. For further explanations on the important operations of passing obstacles, we refer our military readers to *Am. Mil. Lib.* Article Reconnoitring.

OBSTINATE, in a military sense, determined, fixed in resolution.—Hence obstinate resistance.

Obstinately. Persevering. The two armies fought so obstinately, that night only could separate the combatants.

OBSTINEMENT, *Fr.* Obstinately. Stubbornly, inflexibly, with unshaken determination.

S'obstiner, *Fr.* to persist in any thing.

OBSTRUCTION, any difficulty or impediment, opposing the operations of an army, &c.

OBTUS, *Fr.* Obtuse.

Angle Obtus, *Fr.* Obtuse angle.

OBTUSANGULAR, having angles larger than right angles

OBUS, *Fr. Hobits. Howitzer.* A species of small mortar, resembling a mortar in every thing but the carriage, which is made in the form of that belonging to a gun, only shorter. It has been frequently used at sieges; and is well calculated to sweep the covert way, and to fire ricochet shots. They were usually loaded with cartouches. Belidor writes upon the subject at some length in his *Bombardier François*, page 39. See Howitzer.

OCCASIO, *L. Opportunity*, among the Romans, an allegorical divinity, the goddess of time, who presides over the most favorable moment for success in any enterprise. She is represented stark naked, with a long lock of hair upon her forehead, and bald behind. And also standing on a wheel, with wings on her feet, and is said to turn herself very swiftly round; by which is intimated, that we should lay hold of the present opportunity. Among modern nations no people pay greater attention to the instruction which is conveyed by this allegory than the French do. It is common among them to say:—*L'occasion est chauve.* Occasion or opportunity is bald—Alluding to the Roman allegory; and in the same figure, *il faut prendre l'occasion par les cheveux.* You must seize time (by which is meant occasion or opportunity) by the forelock; meaning the forelock of hair alluded to.

OCCASION, *Fr.* has the same signification, in military matters, that affair bears among the French.

Une occasion *bien chaude*, Fr. a warm contest, battle, or engagement.—It further means, as with us, the source from whence consequences ensue. *Les malheurs* *du peuple sont* [illegible]*és a l'occasion de la guerre.* The misfortunes of the people have been occasioned by the war, or the war has been the occasion of the people's misfortunes. The French make a nice distinction which may hold good in our language, between cause and occasion, viz. *Il n'en est pas la cause—Il n'en est que l'occasion, l'occasion innocente.*—He is not the csuse, he is only the occasion, the innocent occasion of it. *Il s'est faché pour une legére occasion;* he took offence, or grew angry on a very slight occasion.

*Se servir de l'*Occasion, *Fr.* to take advantage, or make a proper use of time and opportunity. A French writer has very properly observed, that to seize with dexterity occasions as they occur, is a certain proof of courage and ability, especially in the general of an army. Opportunity or occasion, according to Tacitus, is the mother of events. *Opportunos magnis conatibus transitus rerum.* One complete and decisive victory leads us to a multiplicity of enterprises and great designs, all of which grow out of the first triumph.

A full and decisive victory, by which the country is left entirely at the mercy of the conqueror, must necessarily throw the inhabitants into confusion, and open fresh avenues to conquest; for one opportunity or occasion well embraced and executed upon, becomes the source of many others. There is not, perhaps, in human contingencies any thing which spreads itself so rapidly, or ought to be so little neglected. An enterprise which grows out of another, though it be in reality more arduous to get through than the one which produced it, becomes more easy in its execution: and yet, how many brave and skilful generals have existed, who could not make a proper use of opportunity? In reading over their gallant exploits, one would be led to believe, that all their knowlege consisted in merely knowing how to fight. We have seen them, with unexampled intrepidity, doing every thing that man dares to do, in the field of battle: we have seen them make a decisive blow, and place victory within their grasp; and when they were in the actual possession of all they fought for, we have seen them suddenly relax, give their enemies time to breathe, and finally lose all the fruits of their victory. The courage and promptitude which they manifested in a decisive battle, were the effects of a transitory impulse which was soon wasted and extinguished.

Hannibal, so much celebrated for his bold enterprise against the Romans, was guilty of this error. After the battle of Cannæ it rested entirely with himself to march to Rome. He had only to follow up his first blow, to take advantage of the consternation of the Romans, and to pursue them to their capitol. By so doing he would have made use of the glorious *occasion* which fortune had thrown into his hands by the first victory, and would not have been driven to the necessity of endeavoring to obtain the original object of his enterprise, by fighting several battles that proved abortive of it. Adherbal on this account, after having failed in his attempt to persuade Hannibal to pursue his first good fortune, and to march to the gates of Rome, is recorded to have used the following expression: *Vincere scis, Hannibal; sed victoriâ uti nescis.* Hannibal, thou knowest how to conquer, but thou dost not know how to make use of a victory.

Gustavus Adolphus made the same mistake. Had he, after having won the battle of Leipsic, hung upon the rear of the discomfited Imperialists, pushed and harassed them to the gates of Vienna, there is little doubt of the consequences which must have ensued.

The emperor Ferdinand was as weak in effective forces at the capital as the Romans were at Rome, and the same consternation prevailed among the inhabitants. Had Gustavus profited by his first success, and converted the means, which so glorious an occasion offered, into prompt and vigorous pursuit, he would not indeed have reaped additional laurels in the plains of Outzen, where he fell at the head of his victorious Swedes, but he must have reached Vienna, and there have dictated his own terms.

Carthalon, among the ancients, was on the contrary, an instance of how much may be done by acting up to circumstances, and by judiciously making use of fortune as occasions offer. He was not satisfied with having surprised the Roman fleet, taken off a considerable number of ships, and burned others, but he instantly availed himself of his first good fortune, attempted another enterprise, and succeeded.

The British generals who made war in the American revolution, were as unfortunate in their never taking proper advantage of occasion; their retreat from Princeton, and their subsequent stupor, while the American army of only 4000 men lay hutted at Valley Forge; while they held Philadelphia within 20 miles of them, with 17000 men, is a striking instance. An important occasion was also lost by them after the battle of Brandywine; where the American dispositions and subsequent retreat were alike unsuited to the occasion. The campaign was a series of the most extravagant blunders that can be conceived. The campaign that ended with the capitulation at York Town, was as brilliant on the part of the American arms, as on the English side eggregiously injudicious and unsuitable to the occasion.

Occasional, *(elle,* Fr.) This adjective is used in a different sense among the French, to what it is with us, viz. *Cause occasionally;* any thing that occasions an event.

OCCIDENT, *Fr.* The west.

OCCUPE, *Fr.* to be taken possession

of. *Les environs furent occupés par des troupes légères;* the neighboring places were taken possession of by some light troops.

To OCCUPY, is to take possession of any work or post.

OCTAEDRE, *Fr. Octahedron*, one of the five regular bodies which is terminated by eight equilateral equal triangles.

OCTAGON, (*Octogone*, Fr.) a figure or polygon that has eight equal sides, which likewise form eight equal angles. The octagon, in fortification, is well calculated in its ground for the construction of large towns, or for such as have the advantage of neighboring rivers, especially if the engineer can so place the bastions, that the entrance and outlet of the rivers may be in some of the curtains. By means of this disposition no person could come in or go out of the garrison without the governor's or commandant's permission, as the centinels must have a full view from the flanks of the neighboring bastions.

OCTAVION, (*one*, Fr.) any male or female that is born of a quarteron and a white woman, or of a white man and a quarterone.

OCTONS, *Fr.* a mathematical instrument, which contains 45 degrees or the eighth part of a circle.

OTOEDRICAL, having eight sides.

OCTOSTYLE, the face of a building containing eight columns.

ODA. The different corps or companies into which the janizaries are divided, bear this appellation. The word itself means a room, and the companies are so called from messing separately.

ODEN, ODIN, *or* WODEN, a deity so called in ancient times among the Swedes, and Goths. He was their god of war in the same manner that they acknowleged *Thor* to be their *Jupiter*, and *Freya* their *Venus*.

ODOMETER, (*Odometre*, Fr.) an instrument by which you may ascertain how much ground you go over on foot, or in conveyance.

OEIL, *Fr.* in architecture, any round aperture, which is made in a building.

Oeil *de dome*, Fr. an opening made at the top of an edifice.

Oeil *de bœuf*, Fr. a round window or aperture, which is made in a wall or roof. The black spot in the centre of a target is likewise called *œil de bœuf*, or bull's eye.

Oeil *de pont*, Fr. the opening, or vacant space, under the arch of a bridge.

OEUVRE, *Fr.* in architecture this word admits of various significations in the French language, and may be connected with different prepositions, all of which determine the signification, viz.

Dans Oeuvre, *Fr.* Within. *Trente toises de long dans œuvre;* signifies 30 toises in length within doors.

*Hors d'*Ouvre, *Fr.* Without. *Un escalier hors d'œuvre;* a stair-case without doors.

Sous Oeuvre, *Fr.* From the bottom. *Reprendre un mur sous œuvre;* to build up a wall from the foot or bottom.

Dans Oeuvre *et hors d'*Ouvre, within and without.

OIN, *or* OING, *Fr.* Cart-grease, such as is used to the wheels of ordnance carriages, &c.

OFF, an adverb, which is frequently conjoined with verbs; and, in a military sense, is used as follows:

To march off, to quit the ground on which you are regularly drawn up, for the purpose of going upon detachment, relieving a guard, or doing any other military duty

To tell off, to count the men composing a battalion or company, so as to have them readily and distinctly thrown into such proportions as suit military movements or evolutions.

OFFENCES. All acts, that are contrary to good order and discipline, omissions of duty, &c. may be called military offences. The principal ones are specified in the Articles of War. No officer or soldier can be tried twice for the same offence; unless in case of an appeal from a regimental to a general court-martial: nor can any officer or soldier be tried for any offence committed more than two years before the date of the warrant for trial; except in cases where the offenders were not amenable to justice in that period, when they may be brought to trial any time within two years after the impediment ceased.

Offensive *War*. Military acts of aggression constitute what is called an offensive war. Those who assail an opposite or adverse army, or invade the dominions of another power, are said to wage an offensive war.

Offensive *Weapons*, are such as are fit for the purpose of carrying on offensive war, as cannon, mortars, swords, pistols, musquets, &c.

Offensive *Fortification*. See Approaches, Siege, &c.

OFFICE, in a military sense, signifies any place or apartment which is fixed or appointed for officers, clerks, &c. to attend in, for the discharge of their respective employments; as war-office or office of the war department—adjutant and inspector's office—commander in chief's office—paymaster general's office, &c. &c.

Department and board are sometimes synonymous terms. Sometimes the term office is inapplicable to places where military business is transacted, viz. Clothing department, board of general officers, &c. The word *conseil* is used by the French in the latter sense, the term *bureau* in almost all others.

Office of the inspector-general.

Office of the commissary-general of stores, &c. to the forces at home.

Office of the military agent.

Office of the superintendant of military stores.

Office of the advocate-general.

Office of the physician-general.

Office of the comptroller. Since the commencement of the coalition wars, the whole system of conducting the extraordinary expences of armies serving abroad has undergone a careful revision in the British service. Among other wise suggestions it has been recommended, 1st. That no military officer should himself have a property, or interest, in any article which his duty obliged him to provide for the public service. The object of this suggestion has in some instances been fulfilled; but it still remains with the commander in chief, and with those persons particularly concerned with army matters, to recommend its adoption in the clothing of the different regiments, regular as well as militia. The property which the colonels manifestly hold in this article, exposes the most honorable character to unmerited imputations, and affords ample means to the base and selfish of growing rich at the expence of public virtue. 2. That no payment should be made by the military officer belonging to any department (such as quarter, or barrack master general, inspector of hospitals, commanding engineers, &c.) but that every expence should be paid by the deputy paymasters general, in pursuance of a warrant from the commander in chief. 3. That all vouchers, proving any payment, should be subject to a careful and speedy examination by persons appointed for the purpose, on the spot where the expence was incurred.

In the present war, the whole of the extraordinary expences of an army serving abroad, are conducted by the means of a commissary general, who receives and has charge of all provisions and stores sent for the use of the troops from this country; who purchases, or provides, under the direction of, or in concurrence with, the commander in chief (without whose authority no service can be performed, or expence incurred) such articles as may be more conveniently obtained on the spot, and who is responsible for all monies, provisions, or stores, whether actually used, damaged, lost, destroyed, or plundered, with the condition of procuring proper certificates to prove every mode of their consumption, before he can be discharged therefrom.

A commissary of accounts also attends each army where the numbers are of sufficient importance, with a proper establishment, for the purpose of examining and controlling accounts on the spot; both acting under specific instructions.

All monies, for the ordinary services of the army, are obtained by the means of bills drawn by the deputy paymaster abroad on the paymaster general, which bills are negociated by the commissary general, who is obliged to note the rate of exchange on the bill.

All monies, for extraordinaries, are obtained by drafts of the commissary general on the treasury, which, on their arrival, are accepted, if drawn conformably to the rules laid down, as being in payment for services ordered by the commander in chief, and the value of which have been previously examined and ascertained by the commissaries of accounts on the spot.

The commissaries of accounts make returns of their examination; and on these documents the comptrollers of the army accounts found the best enquiry into the expenditure which the nature of the subject admits of.

The commissaries general and commissaries of accounts, are appointed by warrant under the king's sign manual, directing them to obey all instructions given them for the execution of their duty by the lords commissioners of the treasury; which instructions, since the commencement of this war, have been prepared by the comptrollers of the army accounts, under the orders, and subjected to the inspection of the treasury. Instructions are also given by the secretary of state for the war department, to all commanding officers abroad, to conduct the service on which they are employed, with the utmost regard to public œconomy, and punctuality in their accounts.

The present establishment of this office is composed in the following manner:—

Two comptrollers at 1000*l*. per annum each.

One secretary, 700*l*. ditto.

Civil Department.

One first accomptant and chief clerk 500*l*.

One second ditto, 300*l*.

One third ditto, salary not specified.

Military Department.

One first clerk, one second clerk, one third clerk, salaries not specified.

One chamber keeper, one messenger, one necessary woman, salaries not specified.

Office *of ordnance, or board of ordnance* in the British service.—It belongs to the office of ordnance to supply all military stores for the army and navy; to defray the expence of the corps of artillery, corps of engineers, and other military corps attached to the ordnance service; and also the charge of repairing and building fortifications at home and abroad; excepting field works abroad, and excepting also those fortifications which commanders in chief may deem it expedient to erect without previous instructions from home; in which two cases the bills are paid by the treasury, and placed to account in the extraordinaries of the army. All contingent expences, attending ordnance stores, as well as camp equipage for the artillery, and the article of tents for the privates of the whole army, included in the payments of the ordnance.

The hire of vessels for the transportation of ordnance for foreign service, has since the establishment of the transboard, been transferred to that office: and the building of barracks belongs now to the barrack department, except when barracks are ordered to be built within a fortification.

The master general, who, in his military character, is commander in chief over the artillery and engineers, has, in his civil capacity, the entire control over the whole ordnance department: he can alone do any act, which can otherwise, if he does not interpose, be done by the board. He can order the issue of money, but that order must be executed in the usual mode, by three board officers.

The lieutenant general, who is second in command over the artillery and engineers, is, in his civil capacity, the first in rank among the members of the board; which comprehends four other principal officers; the surveyor general, the clerk of the ordnance, the store-keeper, and the clerk of deliveries. During the absence of the master general, or the vacancy of the office, the whole executive power devolves on the board; and it belongs to them, though they are subject to the interposition of the master general, to make contracts for stores, and for performance of services, and to direct the issue of stores and of money. The signatures of three members of the board, of whom the clerk of the ordnance must be one, are necessary for the payment of money.

Fortifications are erected by the commanding engineer, pursuant to an order from the master general, for carrying a project into execution, according to an approved plan and estimate. The estimate is usually formed in the first place by the engineer, who is afterwards to execute the work; and its accuracy is examined into by a committee of engineers at home, the expediency of the measure being submitted to the master general. All fortifications, works, and repairs are carried on by measurement and by contract, except where the soldiers of the corps of royal military artificers have been employed; and even in such cases the materials worked up by the soldiers are usually supplied by contract.

The sums voted for the ordnance, consist of the three following heads:—1st. The ordinary, which comprehends the provision for the ordinary establishment, civil and military, for the year ensuing. 2dly; The extraordinary, which comprehends every service known before hand, of a temporary and contingent nature, being a provision for the ensuing year also; and 3dly, the services unprovided for, consisting of services which either have been actually paid in the past year, as is generally the case, or which are supposed to have been paid, but which were not foreseen when the estimate for the past year was made up. Among these unforeseen expences are included various exceedings, which have happened in the individual services voted in the past year's ordnance estimates; to which are added, such sums as may be necessary to make up the deficiency of the sum directed to the ordnance use from the naval service.

OFFICERS *belonging to the military branch of the ordnance.*

Corps of Royal Engineers.

One master general, one lieutenant general, one chief engineer and colonel, five colonels, six lieutenant colonels, fifteen captains, thirteen captain lieutenants, twenty-seven first lieutenants.

OFFICERS *belonging to the royal military academy at Woolwich.*

One governor, one lieutenant governor, one inspector, one professor of mathematics, one professor of fortification, one mathematical master, one arithmetical master, two French masters, one assistant fortification master, two drawing masters, one fencing master, one dancing master, two model makers, one clerk.—Salaries unknown.

Ship-Letter OFFICE. During the continuance of the British army in Holland, a mail was made up every Tuesday and Friday night, and forwarded to Yarmouth, where two packets, taken from the Cuxhaven station, were appointed to convey them to the Helder. A gentleman (the deputy comptroller of the foreign office) was sent to the head quarters, as army post master, and in like manner made up two mails per week, but they were sometimes detained for despatches.

On application from the duke of York the letters of soldiers (being subscribed by the commanding officer) were suffered to pass at the reduced charge of one penny, although that sum was not paid at the time of the letter being put into the post-office, as the act of parliament on the subject requires.

The following particulars, relative to this useful and humane establishment, were issued from the general post-office, on the 20th of September, 1799.

"Notice is hereby given, that letters addressed to persons serving with the army under the command of field marshal his royal highness the duke of York, will be received at the Ship-Letter office twice, instead of once in the week, viz. on Tuesday and Friday from ten in the morning until ten o'clock at night, and not on Thursday, as mentioned in the advertisement from this office of the 10th instant.

"And that such letters will be regularly forwarded in vessels from Yarmouth to the Helder Point on the same days as the mails are sent to Cuxhaven.

"Letters by this conveyance will be chargeable with an half-rate of postage, under the act of the 39th of his present majesty, of sixpence each single letter, one shilling double, one shilling and sixpence treble, and so on in proportion, excepting single letters to and from private soldiers and sailors, which are chargeable with one penny only, under the act of the 35th of his present majesty.

"And that newspapers will also be forwarded at a rate of three pence upon each, provided such paper is sent without cover, or in covers open at the sides.

Transport OFFICE, in the British service. The transport-office is a newly created board, and was instituted in July, 1794, at first for the superintendance of the transport service only; but to that employment has since been added the management of the prisoners of war, in health, at home, and abroad.

The immediate duty of this office, so far as related to the transport service, used to be performed by the commissioners of the navy; except in some instances, where the ordnance, or other departments hired the transports wanted for their own immediate service; and the present transport board have pursued the modes of engaging transports which were practised by the navy board, when the transport service was under its directions; but it was thought expedient to constitute a distinct board, to transact the business of that extensive branch of the naval service; and from the unparalleled extent to which that service has been carried during the present war, it is highly proper that every possible check and control should be put over so vast an expenditure of money.

Since the institution of this board, which took place in July 1794, to 22d June 1797, the tonnage of vessels, hired as regular transports for four or six months certain, amounted to 99,656 tons; the tonnage of the vessels hired on freight for service amounted to 178,560 tons; making the whole tonnage 278,216. The total expenditure for this service, during this period, amounted to 4,988,524*l*, 3*s*. 5*d*.

The total expence of this establishment for the year 1796, is stated to have been as follows:

Salaries and allowances	£. 8,838	12	0
Contingent expences	3,907	12	2
Travelling charges and extra pay to officers on distant duty	583	15	6
Total paid by the public	13,329	19	8

The fees which were received from individuals amounted, in the transport department, to £. 2,128 7 6
Ditto prisoners of war, to 114 7 6
Making together £. 2,242 15; out of which sum there has been paid to clerks £. 1,650; and for taxes on salaries £. 334 7 6, which is carried forward to the account of the year 1797.

Deducting from the sum of - - - - -		13,329 19 8
The taxes paid to government	334 7 6	592 15 0
And the ballance carried to 1797	258 7 6	
The expence to the public for the year 1796, appears to have been		12,737 4 8

In a schedule of the fees paid at the war office, and a paper describing the application thereof, it appeared, that (with the exception of an occasional arrangement made in favor of two retired principal clerks) they have been exclusively paid in certain proportions to the following clerks and officers:—

1. Deputy secretary at war. 2. First clerk. 3. Principal clerk. 4. Ditto. 5 Ditto. 6. Clerk for the entry of commissions. 7. Clerk for accounts of deserters. 8. Clerk for business of widows' pensions. 9. Examiner of army accounts. 10. Assistant to the examiner of army accounts. It appeared on examination, that during the years 1792, and 1796, (being respectively periods of peace and war) the amount of all fees received and distributed at the war office, was in the year 1792, 4,991*l*. 3*s*. 4*d*. In the year 1796, 42,731*l*. 11*s*. 11*d*.

War OFFICE, British service, the nature of the accounts which come into the war office, the first head consists of the annual accounts of the ordinary and incidental charges of established regiments; the second regimental extraordinaries, or incidental expences more properly belonging to established corps than to the army in general, which latter are known by the term, "extraordinaries of the army." All claims made by the regimental agents come under the inspection of the "examiner of army accounts," to whose office they are transmitted of course, in virtue of a general delegation of that duty to him by the secretary at war: after his examination and report, the secretary at war, in many instances, orders partial issues of money by letter to the pay master general. No final payment is made, except under the authority of a warrant countersigned by the secretary at war, and in most instances by three lords of the treasury. The regimental agents account finally to the secretary at war. They are likewise accountable to him and to the commander in chief, for every species of mismanagement or misconduct with respect to the officers and soldiers, &c.

The forms under which all payments derived from the establishment are conducted, consist of the following papers:

1. The establishment of a regiment.
2. The warrant from the war-office to make out debentures, with the state of charges annexed.
3. The debenture made up at the pay-office.
4. The final or clearing warrant.

5. The pay-office state.

OFFICERS, in a *military sense*, are of several denominations and ranks, viz.

Commissioned OFFICERS, are those appointed by commission; such are all from the general to the cornet and ensign, both inclusive.

Warrant OFFICERS, those who have no commissions, but only warrants from such boards, or persons, who are authorized by law to grant them.

Non-commissioned OFFICERS, are serjeant majors, quarter master serjeants, serjeants, drum and fife majors, who are appointed by the commanding officers of regiments, and by them may be reduced without a court-martial. But it is not in the power of any captain of a company, or other subordinate officer, to reduce a serjeant without the sentence of a general or regimental court-martial.

General OFFICERS, are those whose command is not limited to a single company, troop, or regiment; but extends to a body of forces, composed of several regiments: such are the general, lieutenant general, major general, and brigadier general; on the United States establishment we have three brigadier generals; and the territory of the United States consists of three districts, over each of which a general presides.

Field OFFICERS, are such as command a whole regiment; as the colonel, lieutenant colonel, and major.

Staff OFFICERS, are all those officers who are not attached to companies in a regiment; whose duties extend over the whole; or a large section, such as a brigade or division; such as the quarter master general, and the adjutant and inspector general, brigade officers, and aids-de-camp, also the quarter masters, adjutants, the physicians, surgeons, and chaplains.—

Subaltern OFFICERS, are lieutenants, cornets, and ensigns.

Flag OFFICERS, are admirals who hoist flags at the mast-heads.

Sea OFFICERS, are, in general, all those who have any command in the navy.

The following observations, are generally applicable to every other military situation on service, that we recommend them to the serious attention of every officer.

It is the duty of all officers, to take notice of any negligence, or impropriety of conduct, in the men, whether on duty or off duty, although the person, or persons offending, should not belong to their particular regiments. All neglects of duty, they are immediately to report to the officer commanding the guard; and they are enjoined to confine, and to report to the commanding officer of the regiment to which they belong, any non-commissioned officers or soldiers, they may detect in disorderly practices, or who appear out of their quarters, conducting themselves either in point of behaviour or appearance, in a manner unbecoming soldiers.

Brevet OFFICER, in the British service. One who in doing duty with other corps takes rank according to the commission which he holds, and which is superior to the one for which he actually receives pay, or by which he can do duty in his own. A captain lieutenant, for instance, in the 23d regiment of foot, who has the rank of brevet major in the army, may, when that corps does brigade duty, command every captain on service with him. The word *brevet* is taken from the French, and in the instance before us means rank without pay. During the French monarchy there were various instances in which individuals held posts of honor during the king's pleasure, or during their own natural lives. Hence *ducs à brevet*; dukes by brevet: or to use an expression more familiar to us, persons who received the patent letter of a dukedom during their natural lives. *Brevet* likewise signified a sum attached by order of the king to the sale of a commission or place for the benefit of a deceased person's wife, heirs, or creditors: this was called *brevet de retenue*. So that the word *brevet*, though limited to one sense amongst us, was applicable to rank and emolument among the French. Hence *breveter* signified to give a person a commission, place, or employment; to invest him with honorary rank; or to authorise him to receive a pension. *Brevet de capitaine*, signifies the commission, or rank of a captain.

Civil OFFICERS *belonging to the British laboratory at Woolwich*:—

One comptroller, one chief fire-master, one assistant fire-master, one inspector of gunpowder manufactures, six clerks, one extra clerk, one surgeon, one inspector of artillery, one assistant ditto, one clerk and draftsman, one clerk, one proof master, one searcher, one instrument keeper, one modeller, one assistant, one constructor of artillery carriages, one assistant to ditto, one second assistant, and two clerks.

OFFICERS *belonging to the British military repository at Woolwich*:—

One superintendant, one modeller, one clerk, one draftsman, one astronomical observer at Greenwich, salaries unknown. To these may be added, the officers belonging to the different out ports and garrisons that are subject to the British government.

Commissioners and OFFICERS *of the British hospital at Chelsea*:—

The *civil department* consists of:

The president of the council. First lord of the treasury. The two secretaries of state. The paymaster general of land forces. The secretary at war. The two comptrollers of army accounts. The governor and lieutenant governor. Salaries unknown.

The *military department* consists of:—

Governor. Lieutenant governor. Major. Adjutant. Treasurer, who is the paymaster general for the time being. Deputy treasurer, one clerk, two chaplains, one secretary and registrar, two clerks, one agent and paymaster to the out pensioners, one physician, one comptroller, one steward, one surgeon, two surgeon's mates, one apothecary, one truss maker, one whitster, one wardrobe keeper, one compter of coal-yard, one organist, one clerk of the works, one master lamp-lighter, one master butler, one master cook, one second cook, two under cooks, one scullery man, one gardener, one master barber, one engine keeper, one clock keeper, one canal keeper and turncock, one sexton, one usher of the hall, one porter, one cellarman, two sweepers, one matron, one master mason, one master smith, one master painter, and one plumber.

Field Officers *belonging to the several regiments of militia in Ireland.*—By an act passed on the 24th of March 1801, the number of field officers of this description has been increased by adding one additional lieutenant colonel, and one additional major, to such of the Irish regiments as consist of eight companies or upwards, and one additional major to such of the said regiments as consist of seven companies or under. The following counties consist of eight companies and upwards:—*Antrim, Armagh, North Cork, South Cork, city of Cork, Donegall, city of Dublin, Galway, Kerry, Kilkenny, King's County, County of Limerick, Londonderry, Louth, Meath, Monaghan, Roscommon, Tipperary, Tyrone, Waterford,* and *Wexford.* The *Carlow, Cavan, Clare, North Downshire, South Downshire, County of Dublin, Fermanagh, Kildare, Leitrim, city of Limerick, Longford, North Mayo, South Mayo, Queen's County, Sligo, Westmeath,* and *Wicklow,* regiments consist of seven companies, or are under seven companies.

All such additional field officers, if qualified, in manner as field officers of the same rank in the militia of Ireland are now by law required to be, and not disapproved by the lord lieutenant, or other chief governor or governors of Ireland, within fourteen days after such certificate shall have been laid before him or them, shall, to all intents and purposes, be deemed and taken as field officers of the respective regiments in the respective ranks to which their commissions shall respectively appoint them; and shall have the same powers according to such commissions respectively, that other field officers in the militia now have, and shall have rank, and receive pay according to such rank from the dates of their respective commissions, in manner and form as the field officers of the militia regiments of Ireland are now entitled thereto.

Officer *in waiting.* The officer next for duty is so called. He is always mentioned in orders, and ought to be ready for the service specified, at a minute's warning. He must not, on this account, quit the camp, garrison, or cantonments.

Officer *of the day.* An officer whose immediate duty is to attend to the interior œconomy and good order of the corps to which he belongs, or of those with which he does mixed duty. The following regulations will explain the nature of that duty when troops are encamped:—

The officers for daily duty in camp, independent of guards, will be a general or generals of the day, according to the circumstances and strength of the camp. In large camps there will be a lieutenant general of the day, and a major general for each wing, or one major general of cavalry, and one of infantry; and majors of brigade in the same proportion: a field officer per brigade, and a captain and subaltern of the day per regiment, and an adjutant and quarter master of the day per brigade.

The general of the day is to superintend the regularity and discipline of the camp, in every particular: he is to visit the guards of the camp and the outposts (unless the latter are put under the command of some particular officer): he is to call out and inspect the inlying piquets, as often, and at such times as he thinks proper: he is to receive all reports in camp, and make immediate communication of any extraordinary occurrences, to the commander in chief.

The captain of the day of each regiment superintends the cleanliness and regularity of the camp of the regiment: he attends the parading of all regimental guards, orders the roll to be called frequently and at certain hours, and reports every thing extraordinary to the commanding officer.

The subaltern of the day assists the captain in his various duties, and reports to him any irregularity, which may come to his knowlege.

The captain and subaltern of the day, are each to visit the hospital at uncertain hours, the captain is to make his report of the state of the hospital to the commanding officer of the regiment.

The regularity of the men's messing is an object of primary importance. The captain or subaltern of the day must visit, and inspect the kettles, at the hour appointed for cooking, and no kettle is to be taken from the kitchens till this inspection is made, and the signal is given by the drum for the men to dine, which should be at the same hour, throughout the camp. Independent of this regimental arrangement, the officers of companies must daily and hourly attend to the messing and every circumstance of the œconomy of their companies, in camp more particularly than in quarters.

The adjutant of the day, of the brigades, is to assist the brigade major in the various details of it, and in the absence of the brigade major is to receive and execute all orders; it may frequently be necessary for him likewise to attend for orders, at head-quarters. It is the duty of the quarter master of the day, of the brigade, to attend to the cleanliness of the camp;

to take care that all broken glass and filth of all kinds is removed, for which the quarter master of each regiment is responsible, as far as the camp of his regiment is concerned.

The officers on duty and those in waiting, as next for duty, who are always to be mentioned in the orders of the day, are constantly to remain in camp, or within their cantonments. No officer is, on any account, to sleep out of camp, or cantonments, without leave.

Officers making written report, are to sign them, specifying their rank, and the regiments to which they belong.

All orders relating to the men are to be read to them by an officer per company, at the next parade after such orders are given out.

When there is a field officer of the day, it is his duty to visit all guards frequently during the day and night; in the morning, on the dismounting of the guards, he will collect the reports, and carry them to the governor or commandant, together with any observations he may himself have made, in the course of his duty in the preceding day. When there is no field officer of the day, the reports will be collected, and delivered to the governor, by the captain of the main guard. Each regiment must have an alarm post assigned to it, to which it will repair in case of fire, or any other extraordinary alarm either by day or by night.

Marine OFFICERS, all those who command in that body of troops employed in the sea service, under the direction of the lords of the admiralty.

OFFICAL, all orders, reports, applications, memorials, &c. which pass through the regular channels of communication, are called official.

OFFICIER, *Fr.* See OFFICER.

OFFICIER *sur terre*, Fr. a land officer, or any commissioned person in the land service.

OFFICIER *du genie*, Fr. an engineer.

OFFICIER *sur mer*, Fr. a sea officer, or any commissioned person in the sea service. The term, however, is not confined to this class only, it likewise signifies the master, pilot, boatswain, &c. of a ship, in which case the latter are called *officiers mariniers*, in contradistinction to the former, who are stiled *officiers de la marine*, or persons who have naval rank, and whose immediate business is to fight their ships. These consisted, in the old French service, of admirals, vice-admirals, lieutenant generals, commodores, captains of ships, or post-captains, majors, captains of light frigates, captains of fireships, captains of stores or ordnance vessels, port-captains, to which may be added, *capitaines en second*, together with the lieutenants and ensigns de vaisseau, whether actually employed, and bearing rank, or being only *en second*. There were besides various employments and situations under the old French government, which entitled individuals to the appellation of *officier*. Those of a military or naval nature were generally and specifically as follow:—

OFFICIER *de guerre*, Fr. a military man or officer.

OFFICIER *dans les troupes*, Fr. any person holding a military situation in the army.

OFFICIER *général*, Fr. a general officer.

OFFICIER *subalterne*, Fr. a subaltern officer.

Les hauts OFFICIERS, *Fr.* Commissioned officers.

Les bas OFFICIERS, *Fr.* non-commissioned officers.

OFFICIER *de la garnison*, Fr. an officer belonging to the garrison of a town, or fortified place.

OFFICIER *en garnison*, Fr. Any officer in garrison.

OFFICIER *au régiment des gardes*, Fr. an officer belonging to the guards.

OFFICIERS *à la suite*, Fr. During the existence of the French monarchy a certain number of individuals were permitted to wear the uniform of a regiment, without being otherwise connected with it. These were divided into two classes, viz.

OFFICIERS *à la suite d'un régiment*, Fr. Officers nominally attached to a regiment. Of this description were the gentlemen appointed by the German princes who were in alliance with France. It is mentioned, as a fact, that before the French revolution took place, there were 42 lieutenant-colonels *à la suite du régiment Deux Ponts*. The prince of that name having been permitted to extend this strange brevet to any number, provided the officers so distinguished, never went into the town where the regiment lay, or interfered with regard to quarters, &c.

The other class consisted of noblemen and gentlemen, who were appointed by the court of Versailles, and received their brevets from the war-minister. These were called *officiers à la suite de toute l'arrée;* or officers bearing brevet rank without being attached, even nominally, to any specific corps.

This institution though extravagant, was nevertheless calculated to maintain the preeminence of military passions, and to cherish those military ideas which, by thus becoming national, conduced in a great measure to the present military character and triumphs of the French.

OFFICIER *dans la marine*, Fr. an officer in the marine service.

OFFICIER *de marine*, Fr. a marine officer.

OFFICIER *marinier*, Fr. See OFFICIER *sur mer*.

OFF-*Reckonings*, a specific account so called, which exists between government and the colonels of British regiments for the clothing of the men. This account is divided into two parts, viz. gross-off-reckonings, and net off-reckonings.

Gross OFF-*reckonings* consist of all the pay of the non-commissioned officers and private men, above the subsistence.

Net OFF-*reckonings*, are the produce of the gross off-reckonings, reserved for the clothing of the men, after the warrant deduction of one shilling in the pound, and one day's pay of the whole regiment for Chelsea hospital; and also the deduction of 2*d*. in the pound for the agent, are made at the pay-office. The balance of the pay of the officers, over and above their subsistence, after the warrant deductions are made, and the respited pay, if there is any, is charged to the officer, is called *clearings*; which are paid by the paymaster to the agent, who pays them to the officers, and there finds his two-pences.

Colonels of regiments either pay the clothier ready money, or allow him interest for forbearance. But no colonel can make a valid assignment of the off-reckonings, till the clothier has exhibited to a board of general officers, appointed by his majesty for that purpose, the patterns of each species of cloathing he is to provide; which patterns are left with the secretary to the clothing board, at the office of the comptrollers of the army, and compared with sealed patterns, already approved by the king; and if found conformable thereto, are sealed by all the general officers, who compose that board, in testimony of their approbation; and when the clothier has completed his clothing, ready to be delivered, the inspector of clothing is directed to view the said clothing, who certifies in writing, that he has found it conformable to his majesty's instructions in quantity and quality; which certificate, together with the colonel's assignment of the off-reckonings, is produced by the clothier to the board of general officers, who pass the assignment; but the contract between the colonel and clothier is not laid before any officer whatsoever; nor is any account brought afterwards of the expence of that clothing. Clothiers provide clothing for complete regiments, as upon the establishment.

There are several other articles of expence defrayed out of the clothing fund, as the charge of package, of carriage by land or water, of insurance, when sent abroad, of interest, more or less, as the off-reckonings are paid, of fees of offices, of clothing lost by desertion, of small accoutrements, colors, drums, and other contingent charges. The subsistence of the men, allowed for clothing lost by deserters, is paid to the respective colonels; and the off-reckonings only are included in the assignment. For the latest regulations on this head, see a British work called *Military Finance*, page 196.

OFFUSQUER, *Fr.* literally means to darken; or conceal. *Ce bâtiment est offusque par les maisons voisines.* This building is darkened or concealed from the eye by the neighboring houses. It likewise signifies in a figurative sense, to out-do or out-match. *Il se sont offusqué.* He feels himself out-done.

OGNON, *Fr.* literally means an onion. The word is sometimes used in a familiar manner by the French to express persons standing in a row. *Ils etoient tous en rang d'ognon.* They all stood, like a rope of onions, in a row.

OGEE, }
OGIVE, } in pieces of ordnance, an ornamental moulding, in the shape of an S, taken from architecture, and used in guns, mortars, and howitzers. See CANNON

OGIVE, (*Ogive*, Fr.) In Gothic vaults those arches are stiled ogives, or ogees, which cross one another diagonally. The French likewise call them *croisés, d'ogives.*

OIL. Every soldier should be supplied with a given quantity of oil and emery, for the purpose of cleaning his arms accoutrements, &c.

OLYMPIAD, in *chronology*, the space of four years, for on the 5th the Olympic games were celebrated in honor of Jupiter Olympius, near Olympia. The Greeks began to use this epocha a little before the building of Rome.

OLYMPIC *Games*, were instituted by Hercules, A. M. 2856, in honor of Jupiter Olympius, at Olympia, a city of Elis, in Peloponnesus. They were celebrated every four years, about the summer solstice. The design of them was to accustom the young military men to running, leaping, and every other military exercise.

OMBRE, (*sécher à l'ombre*, Fr.) This term is in use among the French founders of artillery, when they put the clay or putty, which serves to form the cannon moulds, out to dry, without making any fire for the purpose.

OMRA, *or* OMHRA, *Ind.* plural of *ameer*, a lord. They were persons of considerable consequence in the dominions of the great Mogul. Some of them had command of 1000 horse, others 2000, and so on to 20,000: their pay being regulated according to the number of their horses. The governors and great officers of state were generally chosen out of this body.

ON, a preposition frequently used in military exercise. It precedes those words of command which direct the change or formation of bodies of men upon points that are fixed, viz.

By companies *on* the left backwards wheel. The left pivot man of each company faces at this cautionary word, and remains a fixed point, *on* which the rest wheel back when they receive directions so to do. When the column of companies is to be wheeled into line, the word *on* is equally understood to direct the moveable parts of each company towards the given pivot which faces, and remains a fixed point. In the British drill instructions, they say, *to the left wheel into line*; but in the third part of the regulations *to* is wholly omitted, and the commanding officer uses the term *left wheel into line*, and vice versa; the preposition *on* is here understood: for it is evident, that in breaking into column the component parts of a line wheel as much *from* a given point, as they do *to* a given one, when the column returns into line. Whereas by using *on*, or understanding it to be used, when, for the sake of abbreviation, it is omitted, we preserve the true meaning of the preposition, keep the men in the recollection of the necessary adhesion, and shew, that whether you wheel backwards or forwards, from line into column, or from column into line, there is one invariable fixed point on which you move. It is more proper to say, *on* the right or left forwards wheel into line, in lieu of *to*.

ONAGRA, (*Onagre*, Fr.) a warlike machine, which was used by the ancients to throw stones of different sizes. It is mentioned by Vegetius.

ONDECAGON, a figure of eleven sides and angles.

ONSET, assault, storm, attack.

OPEN, in military movements and dispositions is frequently used, but it is seldom applicable to any operations in face of an enemy; the ranks, &c. on such occasions being generally compact and close. In formation, the word *open* is opposed to *close*, viz. open column, open distance, open order. It also constitutes part of a word of command; as *rear ranks take open order*; in opposition to *rear ranks take close order*.

Open *distances in column*. (*Distances entieres en colonne*, Fr.) The intervals in these cases are always equal in depth to the extent in front of the different component parts of the column.

Open *flank*, in *fortification*, that part of the flank, which is covered by the orillon. See Fortification.

OPENING *of trenches*, the first breaking of ground by the besiegers, in order to carry on their approaches towards the place.

OPERATIONS *de guerre*, Fr. See Military Operations.

Military OPERATION. Military operations consist in the resolute application of preconcerted measures, in secrecy, dispatch, regular movements, occasional encampments, and desultory combats, or pitched battles.

Line of Operation. All the forward movements of an army for the purpose of attacking an enemy, penetrating into a country, &c. may be properly called a line of operation. There is so intimate and so necessary a connection between this line and the line of communication, that no army can be in security, let its temporary successes be what they may, without a strict and unremitting attention being given to their relative points of continuity and correspondence. The line of operation in a siege is partial and extremely limited, so is that of communication; but upon the large scale of war these two lines are of considerable extent and importance. No man, in fact, can be called a good general, or even an officer, who carries his views so far forward as to venture upon a long line of operation, without having previously secured his line of communication, by a perfect knowlege of the countries through which he moves, and having his flanks so thoroughly covered, that he may fall back or retreat according to circumstances. See *Amer. Mil. Lib.*

OPINION. In military proceedings that regard the interior government of an army, this word signifies decision, determination, judgment formed upon matters that have been laid before a court-martial, or court of enquiry. Hence, the court-martial having duly weighed the whole matter before them, are of *opinion*, that ——— is not guilty of any part of the charge preferred against him.

Opinion. Officers on courts-martial give their opinion by seniority, beginning with the youngest in rank.

Opinion, abstractedly considered, may be defined an assent of the understanding, with some doubt or distrust of the contrary. In a political sense, it is the acquiescence of the mind to certain principles. In some instances opinion and principle are synonymous terms. Hence French revolutionary opinions, or revolutionary principles.

A war of Opinion, (*Guerre d'opinion*, Fr.) This expression has grown into familiar use since the commencement of the French revolution, and was never, perhaps, so strongly illustrated as by the perseverance of the French people. Hence also the war commenced against France, as fomented by Burke and the emigrants, was a war against the *opinion*, which overturned the corrupt abuses of the old French monarchy, to color its atrocity it was called a war against jacobinism—a war in support of religion and order—a war in support of regular government—at length a war of extermination; but experience has shewn, that the influence of opinion is paramount to every consideration in life. Friend, parent, and relation, have given way to the superior calls of public duty, growing out of and sanctioned by public opinion.

Opinion, *Fr.* This word is variously used among the French, and as we have already observed, is now generally attached to the contest in which they have been engaged for the maintenance of certain principles that seem to have altered their character. The nation at large, in fact, has taken up an opinion, grounded upon certain principles, which are diametrically opposite to those their forefathers had implicitly followed for 1400 years. When Great Britain formed a part of the well known coalition, the preservation of the balance of Europe was the ostensible cause for entering into hostilities against France; so that the war in 1792, &c. might not improperly be called a war of policy or political necessity, as far as it regarded the coalesced powers; but it has unquestionably been, all a long, a war of opinion on the other side. The French familiarly say, *Il faut respecter l'opinion publique; le pouvoir, l'empire, l'influence de l'opinion.* Public opinion must be respected or attended to; the power, the dominion, the influence of opinion. *L'opinion est la reine du monde.* Opinion governs all the world. When the allied armies under the command of the duke of Brunswick, in 1792, were within a few days march of Paris, it was observed by a firm adherent to the royal cause: *Que malgré l'air imposant d'une telle force, ou combinaison, on avoit tout a craindre pendant qu'il existoit un ennemi a combattre, aussi terrible qu'etoit l'opinion.* That notwithstanding so formidable a force or combination, every thing was to be apprehended so long as that terrible enemy, opinion, remained to be combated against.

OPIUM, a juice, partly of the resinous, partly of the gummy kind. It is brought from Natolia, Egypt, and the East Indies, produced from the white garden poppy, with which the fields of Asia are in many places sown. The first effect of opium is making the person who takes it cheerful; it removes melancholy, and dissipates the dread of danger. The Turks always take it when they are going to battle: it afterwards quiets the spirits, eases pain, and disposes to sleep. A remarkable instance of the powerful influence of opium over the natives of the East is related by Mr. Orme, in his history of the Carnatic, page 270. His words are: the enemy remained quietly until noon, when having sufficiently intoxicated themselves with opium, they began to swarm out in great numbers; but the field pieces (which were served by Europeans) kept them for some time at a distance, every shot doing execution. During the cannonade a party of the nabob's sepoys crossed the river, and taking possession of a small choultry, (an open house for the accommodation of travellers, so called in India) at a little distance to the right of the other, began to fire from this untenable post, upon which a body of 300 marattah horse galloped up to attack them; but before they arrived the sepoys took flight; several of them were cut to pieces, and the rest re-crossing the river ran into the city: the marattahs encouraged by this success, (and still flushed with the opium) now galloped up towards the entrenchment of the great choultry, where they were suffered to come so near, that several of them made use of their sabres across the parapet before the troops within gave fire, which then began, and seconded by that of the four pieces of cannon on the other side of the river, killed and wounded a great number of men and horses, and obliged the enemy to retire in confusion; in this instant an officer unadvisedly took the resolution of quitting his post, and passed the river, in order to give captain Dalton, (who commanded the detachment) some information concerning the artillery; some of the soldiers seeing this, imagined that he went away throug fear, and concluding, that things were worse than appeared to them, followed his example and ran out of the entrenchment; which the rest perceiving, a panic seized the whole, and they left the post with the greatest precipitation, notwithstanding they had the minute before given three huzzas, on the retreat of the marattahs: a body of 3000 mysore horse, who were drawn up on the bank, immediately galloped into the bed of the river, and charging the fugitives with fury, cut down the whole party excepting 15 men: flushed with this success, they made a push at captain Dalton's division on the other side. All these motions succeeded one another so rapidly, that he had hardly time to put his men on their guard; more especially as many of them had caught the panic, from having been spectators of the massacre of their comrades; however, some of the bravest hearkening to his exhortations, stood firm by the artillery: their behaviour encouraged the sepoys, who made a strong fire from behind the low wall in their front, which accompanied by the grape shot of the four field pieces, soon abated the ardor of the enemy, and obliged them to retreat, leaving some horses, whose riders fell within 20 yards of the muzzles of the guns: captain Dalton then advanced a little way into the bed of the river, where he remained until he had collected the dead and the wounded. Not a man who escaped could give any reason why he quitted his post, all of them acknowleging that at the time when they took flight, only one man in the intrenchment was wounded, and that they had nine barrels of ammunition.

OPPORTUNITY. In addition to what has been said respecting occasion, which is nearly similar to opportunity in its import, we shall extract the following account of the latter, which was also honored as a goddess among the pagans.—Opportunity was represented by them as a naked woman, with a long lock of hair before, but bald behind, to intimate, that opportunity if not laid hold on when it offers, soon slips away; also standing with one foot on a wheel, and the other in the air, holding a sail in one hand, and a razor in the other; her feet also being winged, and the wheel in continual motion, to intimate that opportunity is always inconstant and in motion.

To OPPOSE, to act as an adversary against another, to resist, &c. It likewise signifies to place as an obstacle.

OPPUGN, To oppugn, is to attack by force of arms.

ORANGE. A term applied to those persons who adhered to the Stadtholder. Hence, orange party. The troops of the prince of orange were taken into British pay in Sept. 1799.

ORANGE MEN. A title assumed by the members of certain clubs instituted by the British government in Ireland; when the Irish or united Irishmen meditated to rescue their country, in 1796, from British dominion; the orange men were sworn to extirpate the catholics wherever found; and their atrocities surpassed the cruelties of the British in India, and the Spanish South America.

ORB, in *tactics*, is the disposing of a number of soldiers in circular form of defence. The *orb* has been thought of consequence enough to employ the attention of the famous marshal de Puysegur, in his *Art of war*, who prefers this position, to throw a body of infantry in an open country, to resist cavalry, or even a superior force of infantry; because it is regular, and equally strong, and gives an enemy no reason to expect better success by attacking one place than another. Cæsar drew up his whole army in this form when he fought against Labienus. The whole army of the Gauls were formed into an *orb*, under the command of Sabinus and Cotta, when fighting against the Romans. The *orb* was generally formed six deep.

ORDER. The arrangment or disposition of things in their proper place; custom or manner, rule or discipline, as order of march, &c.

ORDER *of battle*. The arrangment or disposition of the different component parts of an army in one or more lines, according to the nature of the ground, for the purpose of engaging an enemy, by giving or receiving an attack, or in order to be reviewed, &c.

Parade ORDER. When a regiment of horse or foot, a troop, or company is drawn up with the ranks open and the officers in front, it is said to be in parade order.

Close ORDER. When a battalion or company is commanded to take close order, at the word *march*, the ranks (supposing the men to stand three deep) close within one pace, marching one and two paces and then haulting. So that close order in ranks comprehends an interval of one pace between each.

Open ORDER. When a battalion or company is commanded to take open order, on the word *march*, the dressers front, and the centre and rear ranks fall back one and two paces, each dressing by the right the instant it arrives on the ground. So that *open* order comprehends an interval of two paces between each rank.

Extended ORDER, is preparatory to rank entire, and is frequently practised in light infantry manœuvres. In order to execute this movement the files of a battalion or company, standing two deep, open from the given point, leaving just space enough for one man. Sometimes, and indeed almost always, when the ground will permit, extended order is taken by facing the battalion or company to the right or left, and by marching to either flank until the whole has gradually doubled its original front. This mode is extremely simple, and consists in nothing more than open order of files from the right or left. The battalion or company after it has obtained all its relative distances, and been halted, is fronted, and each rear rank man springs into the vacancy on the word of command—*Form rank entire*.

Entire, when applied to rank, means a straight line composed of half files. See RANK ENTIRE.

Extended order may likewise be taken without facing to the right or left. This is effected by every file moving sideways a given distance; say one pace, or twenty four inches, which extent of ground a man generally covers, from the centre file. The word of command in this case would be, battalion or company, *mark time*, from the centre by the *side step* to the right and left. The centre file stands fast—*march*—*halt*.

ORDER *Arms*, a word of command, on which the soldier brings the butt of his musquet to the ground, the barrel being held perpendicular in a line with the right side.

ORDERS, in a *military sense*, all that is lawfully commanded by superior officers. Orders are given out every day, whether in camp, garrison, or on a march, by the commanding officer; which orders are afterwards given to every officer in writing by their respective serjeants.

Commander in chief's ORDERS. Such orders as issue directly from the commander in chief's office for the government of the army at large, or for any specific purpose. These orders are sanctioned by the king, and are irrevocable elsewhere.

General ORDERS, are such as are issued out by the general who commands, who gives them in writing to the adjutant general, who first sends exact copies to the general officers of the day, and distributes them at his own quarters to all the brigade majors, who daily go to head quarters for that purpose: where they write down every thing that is dictated to them; from thence they go and give the *orders*, at the place appointed for that purpose, to the different majors or adjutants of the regiments which compose that brigade, who first read them to their colonels and lieutenant colonels, or majors, and then dictate them to the serjeants of companies (this is more frequently done by the serjeant major) who write them correctly down in their respective orderly books, and bring them to all the officers belonging to the company.

Garrison ORDERS, such orders and instructions as are given by the governor or commanding officer of a town or fortified place.

Brigade ORDERS, orders which are issued by the generals commanding, through the brigade majors, to the several adjucorps that do duty together, or are brigaded.

Regimental Orders, such orders and instructions as grow out of general or garrison orders, or proceed immediately from the commanding officer of a regiment.

Standing Orders, certain general rules and instructions which are to be invariably followed, and are not subject to the temporary intervention of rank; of this description are those orders which the colonel of a regiment may judge fit to have inserted in the orderly books, and which cannot be altered by the next in command without the colonel's concurrence.

Sailing Orders, final instructions which are given to ships of war, and the commander in chief.

Beating Order, an authority given to an individual empowering him to raise men, by beat of drum, for any particular regiment, or for general service. It consists of a warrant which is signed by the secretary at war, or issued in his name, by the adjutant general, or adjutant and inspector of the army.

Military ORDERS, are companies of knights, instituted by kings and princes; either for defence of the faith, or to confer marks of honor on their military subjects. They are as follow:

Order *of the Bear*, a military order in Switzerland, erected by the emperor Frederic II. in 1213, by way of acknowlegement for the service the Swiss had done him, and in favor of the abbey of St. Gal. To the collar of the order hung a medal, on which was represented a *bear*, raised on an eminence of earth.

Amaranth, an order of military knighthood, instituted in Sweden, by queen Christina, in 1645, at the close of an annual feast, celebrated in that country, and called *wirtschaft*. Their device was the cypher of *amarante*, composed of two *A's*, the one erect, the other inverted, and interwoven together; the whole inclosed by a laurel crown, with this motto, *Dolce nella memoria.*

Argonauts of St. Nicolas, was the name of a military order, instituted by Charles III. king of Naples, in the year 1382, for the advancement of navigation, or as some authors say, merely for preserving amity among the nobles. They wore a collar of shells, inclosed in a silver crescent, whence hung a ship with this device, *Non credo tempori.*

Order *of Calatrava*, a Spanish military order. It was instituted in 1130 by don Santio, of Toledo. The habit of these knights is a black garment, with a red cross upon the breast.

Order *of Alcantara*, a Spanish military order. It was established by Ferdinand the second, king of Leon and Castile, in 1170. They wore a green cross upon their garment.

Order *of St. James*, instituted by Ferdinand II. in 1175. These knights had the privilege of wearing their hats in the chapter, in the presence of their sovereign.

Order *of St. Michael*, instituted in 1469, by Lewis XII. in honor of the important services done to France by that archangel at the siege of Orleans, where he is supposed to have appeared at the head of the French troops, disputing the passage of a bridge, and to have repulsed the attack of the English, whose affairs ever after declined in that kingdom. The order is a rich collar, with the image of that saint pendent thereto; with this inscription: *Immensi tremor oceani.*

Order *of the Holy Ghost*, instituted by Henry II. of France, in 1578. The number of knights are 100, besides the sovereign, who is always grand-master.

Order *of St. Louis*, instituted by Louis XIV. in the year 1693. This order has remained entirely in the possession of military men, ever since its institution, and has been of singular use in keeping up the spirit, and rewarding the services, of those who have distinguished themselves. The number of knights is unlimited, being given to every man of merit. The order is a golden cross, with eight points, which hang pendent to a broad crimson riband. The motto is *Bellicæ virtutis præmium.*

Order *of Mount Carmel*, instituted by Henry IV. in 1608.

Order *of St. Lazarus*, is of a very early institution, but has been often neglected, and as often revived, till Louis XV. united the order of St. Carmel and St. Lazarus in April 1722. The king was sovereign, chief, founder, and protector.

Order *of the knights of Malta.* See Malta.

Order *of the knights of the Garter.* See Garter.

Order *of the knights of the Bath.* See Bath.

Order *of the golden fleece*, instituted by Philip duke of Burgundy, surnamed the Good, in 1429. See Fleece.

Order *of the Annunciation*, instituted by Amadeo, count of Savoy, surnamed the Green, in memory of Amadeo, the first earl, who had valorously defended the island of Rhodes against the Turks. The collar belonging to this order is of gold, and on it are these four letters, *F. E. R. T.* which means *Fortitudoe jus Rhodum tenuit*, with the figure of the annunciation hanging to it.

Order *of knights templars*, instituted at Jerusalem about the year 1118. At first there were but nine of the order, and the two principal persons were Hugo de Paganis, and Jeoffroy of St. Omer's. This order, after having performed many great exploits against the infidels, became rich and powerful all over Europe; when, on the 22d of May, 1312, the pope by his bull, pronounced the extinction of the order, and united their estates to the order of St. John of Jerusalem. They took the name of templars, because their first habitation stood near the temple dedicated to our Saviour at Jerusalem.

ORDER *of the knights of St. Jago*, instituted by king Ramico, of Spain, in commemoration of a victory obtained against the Moors, A. D. 1030. Their ensign is a red cross in form of a sword.

ORDER *of knights of the band*, erected by Alphonso, king of Spain, in the year 1268. Their name proceeded from the knights wearing a red scarf, or lace of silk, the breadth of three inches, which hung on their left shoulder.

ORDER *of knights of the Redemption*, erected in the kingdom of Arragon, by king James, who conquered the island of Majorca, in the year 1212. Their garments are white, with a black cross thereon.

ORDER *of Teutonic knights*, established towards the close of the 12th century, and thus called, as chiefly consisting of Germans, anciently called Teutons.

ORDER *of the knights of St. Stephen*, instituted in the year 1561, by Cosmo, duke of Florence. They wear a red cross with a border of gold.

ORDER *of merit*, instituted by Frederic III. king of Prussia, as a reward to those officers whose behaviour deserved some marks of distinction. The ensign of this order is a golden star of eight rays, enamelled with blue, which is worn appendant to a black riband, edged with silver: the motto, *Pour le mérite*.

ORDER *of St. Alexander Newski*, or the red riband, which was instituted by Peter I. emperor of Russia; but the czarina Catharine I. conferred it in the year 1725.

ORDER *of the stole*, an order of knights instituted by the kings of Arragon.

ORDER *of the golden stole*, a Venetian military order, so called from a golden stole, which those knights wore over their shoulder, reaching to the knee, both before and behind, a palm and a half broad. None are raised to this order but patricians, or noble Venitians. It is uncertain when this order was instituted.

ORDER *of Maria Theresa*. This order was instituted in June, 1757, by the empress queen of Hungary. In 1765, an intermediate class, styled knights commanders, was added to the two classes that originally composed the order. See THERESA.

ORDERLY *Officer*. See OFFICER OF THE DAY.

ORDERLY *serjeant*, } are appointed to at-
ORDERLY *men*, } tend general, or
other officers that are entitled to have them.

ORDERLIES, the non-commissioned officers and private men who do orderly duty are so called.

Orderly serjeants when they go for orders are sashed.

Orderly corporals and orderly men wear their side arms, and carry a small osier switch or cane in their hands.

In the dragoons, orderly men, on foot, have their sword-belts and bayonets; and on horseback, are dressed the same, only with gloves, and boots, and spurs of course, with the sword-belt and sword. They likewise have their pistols. When an orderly dragoon or foot soldier is sent from one quarter to another, the time of his setting out must be specified on the back of the letter which he carries; the dragoon must take care to bring his horse in cool and properly (unless he has been sent on any pressing occasion) and they must both return to quarters perfectly sober.

ORDERLIES *in general*. It is the duty of the serjeant-majors to see that the orderlies are properly dressed and accoutred, before they are inspected by the adjutant, who parades them every morning in front of the main guard, &c. When private soldiers are chosen for orderlies in mixed duty, the credit of the corps from which they are taken requires, that they should be the best set up and the best behaved men belonging to it.

ORDERLY *non-commissioned officers*, are those who are orderly, or on duty for that week; who, on hearing the drum beat for orders, are to repair to the place appointed to receive them, and to take down in writing, in the orderly book, what is dictated by the adjutant or serjeant-major; they are then immediately to show those orders to the officers of the company, and afterwards warn the men for duty.

ORDERLY *book*. Every company has such a book in which the serjeants write down both general and regimental orders, for the specific information of the officers and men. This book is provided by the public.

ORDERLY *Drum*. The drummer that beats orders, and gives notice of the hour for messing, &c. is so called.

ORDINAIRE, *Fr.* The soldier's messing together is so called among the French.

ORDINANCE, or **ORDNANCE**, a name given to all that concerns artillery, or engineering: thus, the commander in chief is called master general of the *ordnance*; and the next officer, lieutenant general of the *ordnance*, instead of *artillery*.

ORDNANCE. The British value of all brass ordnance is at 84*l.* 17*s.* or 371 dollars *per* ton, for the metal; that is, the weight of the gun, and 12lbs. *per.* hundred weight for waste: to which is added for casting, on the total weight of metal used, 64*l.* or 286 dollars *per* ton for light pieces; 54*l.* or 240 dollars for medium; and 44*l.* 195 1-2 dollars for heavy.

Iron ordnance cost 20*l.* or 90 dollars *per* ton. See also the words GUNS, MORTARS, HOWITZERS, &c.

For the proof of all kinds of ordnance, see the word PROOF.

ORDINARY TIME. This in the British service is the slowest time in marching that is permitted to be used by infantry, and consists of a pace which is 30 inches from heel to heel, and of which only

75 are to be taken in a minute. But there is a manifest absurdity in having a different length of pace; in the American service the pace in all time is 24 inches; and the ordinary time is what the British call *quick* time; and is in fact gay and lively, or the time of country dances.

ORDONNANCE. *Fr.* A warrant. This word is variously used among the French, viz.

*Compagnies d'*ORDONNANCE. Independent companies, or such bodies of armed men as do duty by detached companies, and are not formed into regular regiments. Of this description were the gendarmes, the light horse, and the musqueteers, under the French monarchy.

ORDONNANCES, *Fr.* Orderly men, whether on foot or horseback.

ORDONNANCE, *Fr.* The disposition or arrangement of troops for battle.

ORDRE, *Fr.* Parole and countersign so called.

*Aller à l'*ORDRE, *Fr.* To go for the parole or countersign.

*Récevoir l'*ORDRE, *Fr.* To receive or get the parole or countersign.

ORDRE *quel'on donne à la tranchée*, Fr. Parole and countersign together with specific orders, which are given out every night in the trenches.

ORDRES *Militairies*, Fr. Military orders.

Nouveaux ORDRES, *Fr.* Fresh orders.

ORDRES *de mouvement*. Marching orders.

ORGANIZATION *of Troops*. The act of putting troops into such uniform state of discipline, as may fit them to cooperate on any service.

ORGUES, thick long pieces of wood, pointed and shod with iron, clear one of another, hanging perpendicular each by a rope, over a gate of a strong place to be dropped in case of emergency.

Their disposition is such, that they stop the passage of the gate, and are preferable to *borses* or *portcullises*; because these may be either broken by a petard, or stopped, by different contrivances, in their falling down. But a petard is useless against an *orgue*; for if it break one or two of the pieces, others immediately fall down and fill up the vacancy.

ORGUE, (*un Orgue*, Fr.) A term used to express that arrangement or disposition of a certain quantity of musquet barrels in a row, which by means of a priming train of gunpowder, may be subjected to one general explosion. This machine has been found extremely serviceable in the defence of a low flank, a tenaille, or to prevent an enemy from crossing the ditch of a fortified place.

ORIENT, *Fr.* The east.

ORIFLAMME, *Fr.* The ancient banner belonging to the abbey of St. Denis, which the counts du Vexin, who possessed the perpetual advowson of the abbey, always bore in the different wars or contests that formerly prevailed between the abbot and some neighboring lords. When the Vexin country fell into the hands of the French kings, they made the oriflamme the principal banner of their armies, in honor of St. Denis, whom they chose for the patron and tutelary saint of France.

ORILLON. See FORTIFICATION.

ORME, *Fr.* Elm. This wood was considered of such consequence by the old French government, (and perhaps is equally so by the present) that a specific order was made out in 1716, enjoining all persons letting or holding land in French Flanders, Artois, and Hainault, to plant elm trees, in order that there might be a constant supply in future of carriages and wainage for the artillery.

ORNAMENTS *Military*. Those parts of the dress of a soldier which are more for appearance or distinction than for absolute use; as gorgets, plates for cross-belts, pouch ornaments, &c.

ORTEIL. See BERM in FORTIFICATION.

ORTHOGON, any rectangular figure.

ORTHOGRAPHIE, *Fr.* See ORTHOGRAPHY.

ORTHOGRAPHY. The art of drawing or sketching out a work according to its breadth, thickness, elevation, and depth.

OSIER, a young willow twig, with which hurdles are made.

OSTAGE, *Fr.* See HOSTAGE.

OTTOMAN. A name generally given to the Turks, and to the Turkish empire, from Ottoman, who was one of their most celebrated emperors.

OVATION, (so called of a sheep, because the general who so triumphed, offered only a sheep; whereas in the great triumph he offered a bull) an inferior sort of triumph allowed by the Romans to the generals of their armies for lesser victories, as over slaves, &c. or when the war had not been declared pursuant to military usage. According to Kennett, in his Roman Antiquities, page 224, the word ovation is said to have derived its name from shouting *evion!* to Bacchus; but the true original is *ovis*. The shew generally began at the Albanian mountain, whence the general, with his retinue, made his entry into the city: he went on foot with many flutes or pipes, sounding in concert as he passed along, wearing a garment of myrtle as a token of peace, with an aspect rather raising love and respect than fear.

We have already observed, with Gellius, that this honor was then conferred on the victor, when either the war had not been proclaimed in due method, or not undertaken against a lawful enemy, and on a just account; or when the enemy was but mean and inconsiderable. But Plutarch has delivered his judgment in a different manner; he believes that heretofore the difference betwixt the *ovation* and the triumph was not taken from the greatness of the atchievements, but from the manner of performing them: for they who, having fought a set battle, and slain a great number of the enemy, returned victors, led that martial, and, as it were, cruel procession of the triumph. But those who without force by benevolence and civil behaviour, had done the business, and prevented the shedding of human blood; to these commanders custom gave the honor of this peaceable ovation. For a pipe is the ensign or badge of peace; and myrtle the tree of Venus, who, beyond any other deities, has an extreme aversion to violence and war. *Vide Plut. in Marcell.* For a full account of this ceremony, as well as of the Roman triumph, see *Kennett*, page 224.

OVENS. The modern improvements in the art of war, has beside making biscuit, the common food of man and horse, also introduced in the equipage of armies, ovens of *cast iron*, which travel with the waggon train, and the bakers are classed and under military discipline, in the performance of their important functions. The operations of dressing food in military camps, have been also improved by the introduction of count *Rumford's* process of boiling, roasting, and baking by steam; all performed by the single fire which heats the oven.

OVERFLOW. See INUNDATION.

To OVERLAP, to overspread any preceding object. In marching by echellon, for the purpose of forming upon any given point, but particularly in wheeling from column into line, troops may loose their relative distances by not taking ground enough; when this occurs, the rear division, company, or section, unavoidably crouds upon its preceding one, and it is then said to *overlap*. When this happens on service, the troops, so shut out, must remain as serre-files, or reserve, to fill up the intervals that will necessarily present themselves in action. But whether so or not, the line must, on no account, be deranged by moving it to right or left.

OVERLANDRES, *Fr.* Small barges that ply upon the Rhine and the Meuse.

To OVER-RUN. In a military sense, to ravage, to lay waste. A country which is harassed by incursions, is said to be *over-run*.

OVERSEER, an officer in the ordnance department, who superintends the artificers in the construction of works, &c.

OVERSLAGH, as a *military phrase*, which is derived from the Dutch, to skip over, will be better explained by the following table.—For instance, suppose 4 battalions, each consisting of 8 captains, are doing duty together, and that a captain's guard is daily mounted: if in the first regiment the second captain is doing duty of deputy adjutant-general; and the 4th and 7th captains in the second are acting, one as aid-de-camp, the other as brigade major; the common duty of these three captains must be *overslaghed*, that is *skipped* over, or equally divided among the other captains.

TABLE *of Explanation.*

Regiments.	No. of captains.	Heads of each column.							
		1	2	3	4	5	6	7	8
Pennslvania.	8	1	5	8	12	15	19	23	26
Georgia.	8	2	6	9	13	16	20	24	27
Massachu's.	8	3		10	14	17	21	25	28
Virginia.	8	4	7	11		18	22		29
Total.	32								

N. B. The three blanks shew where the overslaughs take place.

OVERTHROW, total defeat, discomfiture, rout.

OUEST *ou Occident*, Fr. One of the four cardinal points of the world, or the west.

OURAGAN, *Fr.* A violent tempest.

OUTBAR, to shut out by fortification.

OUT-GUARD. See OUT-POSTS.

OUTILS, *Fr.* Tools of every description that are used by the artificers and workmen belonging to the artillery, &c.

OUTILS *à mineur*, Fr. Tools used in mining.

OUTLINE, the line by which any figure is defined.

OUTPART, at a distance from the main body. See OUT-POSTS.

OUT-*posts*, a body of men posted beyond the grand guard, called out-posts, as being without the rounds or limits of the camp. See POSTS.

OUTSIDE, in *fencing*, that part which is to the right of the line of defence.

OUTSIDE *Guard*, a guard used with the broad sword and sabre, to defend the outside of the position. See BROADSWORD.

OUTWALL. See REVETEMENT.

OUTWARD FACE, a word of command for troops to face to the right and left from their centre.

To OUTWING, to extend the flanks of an army or line in action, so as to gain an advantageous position against the right or left wing of an enemy. This manœuvre or evolution is effected by the *movement on an oblique line.* See MOVEMENTS.

OUT-*works*, in *Fortification*, are works of several kinds, which cover the body of the place, as ravelins, half-moons, tenailles, horn-works, crown-works, counter-guards, envelopes, swallow-tails, lunettes, covert-ways, &c.

These out-works, not only cover the place, but likewise keep an enemy at a distance, and hinder his gaining any advantage of hollow or rising grounds; as such cavities and eminences may serve for lodgments to the besiegers, facilitate the carrying on approaches, and enable them to raise their batteries against the town. When outworks are placed one before another, you will find a ravelin before the curtain, a horn-work before the ravelin, and a small ravelin before the curtain of the horn-work; those works which are nearest to the body of the place must be the highest, though lower than the body of the place, that they may gradually command those without them, and oblige the enemy to dislodge, if in possession of them.

OUVERTURE *des portes*, Fr. The opening of the gates in a fortified town or place, according to specific military rules. The method in all regular governments is too well known to require any particular explanation.

OUVERTURE *et fermeture des portes chez les Turcs*, Fr. There are certain laws and regulations among the Turks, by which the janizaries are entrusted with the keys belonging to the gates of every fortified town or place in which they do garrison duty. The gates are always opened at day-break by two or four janizaries There is a capigy or porter stationed at each gate. Whenever he opens the gate he repeats, in an audible tone of voice, certain words in the praise of God and the sultan, after which he returns the key or keys to the janizaries, who carry them to the governor or commandant of the place. The closing of the gates is done with the same solemnity.

OUVERTURE *de la tranchée*, Fr. the opening of the trench or trenches

OUVRAGES, *Fr.* Works. See FORTIFICATION.

OUVRAGE *à corne*, Fr. *Hornwork*. See FORTIFICATION.

OUVRAGE *à couronne*, Fr. *Crowned* work. See FORTIFICATION.

OUVRAGES *detachés*, *pieces detachées*, Fr. See DEHORS.

OUVRIR, *Fr.* To open.

OUVRIR *les rangs*, Fr. To take open order.

En arrière, OUVREZ *vos rangs*, Fr. Rear ranks take open order.

S'aligner à rangs OUVERTS, Fr. To aligne or dress in line at open order.

A jour OUVRANT. At break of day.

A portes OUVRANTES. At the opening of the gates.

OUVRIERS, *Fr.* All sorts of artificers and workmen employed in fortification, &c are so called.

OXFORD *Blues*. See HORSE GUARDS

OXYCRAT, *Fr.* A certain portion of vinegar to five or six times its quantity of water. This mixture is frequently used on service, and in hot weather, to allay the burning heat of any inflamed part. It is likewised employed to cool cannon, during an engagement, in very hot firing.

OXYGENE. The chemical base of vital air with which nitre is found to abound, and to which gunpowder owes its rapid and perfect combustion.

King's or *queen's Own*, a term which has been attached to some British regiments since the revolution in 1688. Thus the 4th, which landed with William III. was called the 4th, or King's Own.

P

PAAT, *Ind.* A promissory note.

PACE. The common pace is of no determined length; though made use of as a measure by most military writers.

In Germany, and amongst most of the northern powers, the pace is considered equal to 2-10 of a Rhinland rood.

In France the pace is commonly reckoned at 2 1-2 feet. The military pace is 2 ft.

In England it is usually reckoned at 2 1-2 feet.

The geometrical pace is equal to 5 French royal feet; 60,000 of which make a degree of the equator. This makes the geometrical pace equal to 6.102 English feet, and 5.6719 Rhinland feet.

For the military pace, see MARCHING.

To PACE, as a horse does: *aller à pas*, Fr. There are four kinds of paces in the manége, the walk, trot, gallop, and amble. The last, more particularly, is called a pace, or easy motion, wherein the horse raises the two feet of the same side together.

PACHA. The captain pacha, among the Turks, is the chief admiral and superintendant general of the marine. He generally commands in person. The sailors and soldiers of the military marine were formerly called *lavans* or *lavantis*; the soldiers are now called *galiondjis*.—The sailors are Turks from the maritime towns, or Greeks from the Archipelago. They are in constant pay. The soldiers, or *galiondjis*, are all mussulmen, and only receive pay when they are in actual service. We recommend to our military readers an important work, which has lately been published at Paris, and from which they will derive considerable information respecting the Turks. It is intituled, Travels in the Ottoman Empire, Egypt, and Persia, by citizen Olivier, member of the French National Institute.

PACKET-*Boats*, small vessels that sail from the different sea ports and carry passengers, mails, &c. and keep up a regular intercourse with different places.

PADDY, *Ind.* Rice in the husk whether dry or green.

PADSHA, *Ind.* A king.

PAGEANT, in *ancient military history*, a triumphal car, chariot, arch, or other like pompous decoration, variously adorned with colors, flags, &c. carried about in public shows, processions, &c.

PAGES, *mousses ou garcons*, Fr. Young lads of the description of English cabin boys, who learn navigation, and do the menial offices on board a French ship.

PAGOD, *Ind.* a general name given by the Portuguese to the temples in the east. It also denotes a coin. See PAGODA.

PAGODA, *Ind.* The place of worship among the Hindoos. It is likewise the name of a gold coin of the value of eight rupees. The English and Dutch coin pagodas. There are also silver pagodas struck at Marsingua, &c. with the figure of some monstrous idol.

PAILS, made of wood, with iron hoops and handles, hold generally four gallons, and serve in the field to fetch water for the use of artillery works, &c.

PAILLASSES, *Fr.* Straw beds, commonly called *paillasses*. These are furnished by the barrack-department for the accommodation of sick soldiers.

PAILLE, *Fr.* Straw.

Les soldats vont à la PAILLE, *Fr.* The soldiers are going to the forge yard or depot. This term is likewise used to signify the indulgence occasionally granted to soldiers for exercise or necessary evacuations. Thus when a battalion has gone through its manual, &c. the commanding officer gives the word *à la paille*.

Rompre la PAILLE *avec quelqu'un*, Fr. a figurative term, signifying to quarrel or fall out with any body, in an open and unreserved manner.

PAILLE, *Fr.* likewise signifies any flaw in metals. *Cette lame est fine, mais il y a quelques pailles;* this blade is finely tempered, but there are some flaws in it. *La lame de son épée se cassa à l'endroit ou il y avoit une paille.* The blade of his sword broke where there was a flaw.

PAILLER, *Fr. Palearius.* An ancient body of French militia. The soldiers belonging to it were probably so called either from the circumstance of their wearing straw in their helmets, in order to know one another in action, or because they were accustomed to set fire to their enemy's habitations, &c. with bundles of straw, which they always carried with them for that purpose. The inquisitive may be more fully satisfied on this subject by referring to *Ducange's Glossary*.

PAIN *de Munition*, Fr. Ammunition bread. In the folio edition of marshal Saxe's reveries, page 16, we find the following important observations on the subject of ammunition bread. He states that bread never should be given to soldiers on active service, but that they should be accustomed to eat biscuits, for the following reasons:—Biscuits will keep a considerable number of years, and every soldier can conveniently carry with him in his haversack a sufficient quantity for seven or eight days. Those officers who have served among the Venetians, will readily prove the justness of this remark. But there is a species of biscuit, or hard baked bread, that never crumbles, (called *soukari* by the Russians) which is preferable to any thing of the kind. It is square, and about the thickness of a nut, and takes up less room than either bread or biscuits.

Purveyors, who are interested in the business, maintain a different opinion. They tell you that bread is best for troops. Every man of experience knows the contrary; for it is notorious, that contract, or ammunition bread, is not only made of unwholesome ingredients, but that it is seldom more than half baked; which together with the water it contains, increases the weight, and consequently enhances the value. Add to this, that purveyors must unavoidably increase the expence of the army by being obliged to employ a great number of bakers, bakers' men, waggons, and horses. Independent of the expence, it is evident, that the operations of an army must unavoidably be clogged by the necessity of providing quarters for these people, of having a quantity of hand-mills, and of employing a certain number of effective men to form detachments for their security.

It is impossible to calculate the train of robberies and inconveniences which grow out of this system, the embarrassments it occasions to a general; but above all the diseases, which bread, supplied in this manner, will always engender, and the fatigue that the troops must necessarily undergo to get their rations. Were all these mischiefs obviated, there is still another evil in reserve, which no precaution can set aside. This is the certainty that an enemy may be under, with respect to your intentions and motions, by narrowly watching the establishment and disposition of your ovens. Were I, continues the marshal, to adduce instances and facts to corroborate these observations, I might dwell considerably at large upon the subject. I do not hesitate to say, that much ill success, which is attributed to other causes, proceeds entirely from the provision and distribution of ammunition bread. He even goes farther, for he asserts unequivocally, that soldiers ought sometimes to be enured to almost every species of privation, and instead of being provided with biscuit, occasionally to receive grain, which they must be taught to bake upon iron pallets, after having bruised and made it into dough.—Marshal Turenne has observed upon the same subject in his Memoirs. Marshal Saxe, indeed, does not scruple to say, that although there might be plenty of bread, he would, in conformity to the opinion of many good officers, suffer his men to feel the want of it. I have, adds the latter, been eighteen months successively on service with troops who during the whole of that period never tasted bread, and yet never once complained or murmered. I have, on the contrary, been frequently with others that had never familiarized themselves to that privation, and who, on the first appearance of want, were disheartened. In consequence of which the very nerve of enterprise and hardihood was broken, and nothing great could be undertaken.

The modern French armies have carried this idea to an astonishing extent and with success; not only their troops in the field are supplied with biscuit, but their horses also.

PALADIN, *Fr.* A name given to those ancient knights who were either what the French call *comtes du palais*, counts of the palace, or were princes lineally descended from Charlemagne, and other old kings.

PALANKEEN, *Ind.* a vehicle carried on the shoulders of four men, by means of a bamboo pole extending from each end: it carries one person in a reclining posture: it has a canopy which is supported by a pole raised along the centre, from whence it is pendent on either side. The palankeens are of various kinds; some are shaped like a chair, in which the person carried sits; in others they recline or sleep, and frequently journies of 2000 miles are thus performed.

PALEAGAS, *Ind.* See POLYGARS.

PALANQUE, *Fr.* a kind of fortification, so called in Hungary. It is made of stakes driven into the ground, interlaced with twigs, and covered with earth, and serves to stop the progress of an advancing enemy.

PALÆSTRA, in *Grecian antiquity*, a public building, where the youth exercised themselves in the military art, wrestling, running, playing at quoits, &c.

PALEE, *Fr.* The row of piles upon which a wooden bridge is constructed, is so called.

PALESTRE, *Fr.* a wrestling place, or exercising ground. It comes from the Latin, and was originally derived from the Greek.

PALIS, *Fr.* the rows of small pointed stakes, which serve for any species of inclosure, are so called. The term *palisade* is derived from it.

PALISADES, *or* **PALISADOES**, in *fortification*, stakes made of strong split wood, about nine feet long, six or seven inches square, three feet deep in the ground, in rows about 2 1-2 or three inches asunder, placed in the covert-way, at three feet from and parallel to the parapet or side of the glacis, to secure it from surprise.

They are also used to fortify the avenues of open forts, gorges, half moons, the bottoms of ditches, and, in general, all posts liable to surprise. They are usually fixed perpendicularly, though some make an angle inclining towards the ground next the enemy, that the ropes cast over them, to tear them up, may slip off.

Turning PALISADES, are an invention of Mr. Cohorn, in order to preserve the palisades of the parapet of the covert-way from the besiegers shot. They are so ordered, that as many of them as stand in the length of a rod, or about ten feet, turn up and down like traps, so as not to be in the sight of the enemy, till they just bring on their attack; and yet are always ready to do the proper service of palisades.

PALISSADES, *Fr.* See PALISADES.

PALISSADES *decamp*, *Fr* several pieces of wood so arranged and tied together, that they may with great dispatch be fixed in the ground, which is marked out for the encampment of an army.

PALISSADES *ferrées*, palisades that are shod with iron. They are used in shallow streams and marshes to prevent small craft from plying, or persons from crossing them on foot.

PALKEE, *Ind.* See PALANKEEN.

PALL, a covering thrown over the dead. It is always used in military burials.

PALLAS, a name in the Heathen mythology, which is given to Minerva, who was looked upon as the goddess of war.

PALUDAMENTUM, *(Chlamys)* among the ancients, a garment worn in time of war by the principal men of Rome, especially the generals, who were called for that reason *paludati*. The soldiers, having only short coats, called a *sagum*, were denominated *sagati*.

The *paludamentum* was open on the sides, coming down no lower than the navel, and had short sleeves. It was either of a white, purple, or red color, and sometimes black. Kennett, in his Roman Antiquities, page 313, says, the old *paludamentum* of the generals was all scarlet, only bordered with purple; and the *chlamydes* of the emperors were all purple, commonly beautified with a golden or embroidered border.

PAN, the side of a rectangle or irregular figure.

PAN, likewise means the distance which is comprized between the angle of the epaule and the flanked angle in fortification. See FACE OF A BASTION.

PAN, a name well known among the shepherds of antiquity, and frequently used by modern writers in their rural fictions. In military history it signifies a man who was lieutenant general to Bacchus in his Indian expedition. He is recorded to have been the first author of a general shout, which the Grecians practised in the beginning of their onset in battle. See PANIC.

PAN, that part of the lock of a musquet, pistol, &c. which holds the priming powder.

PANACHE, } *Fr.* a plume, a bunch
PANNACHE, } of feathers.

PANACHES *flottans*, Fr. nodding plumes.

PANNACHES likewise signifies in architecture, the triangular part of an arch that contributes towards the support of a turret or elevation which is raised above the dome of any particular edifice.

PANCARTE, *Fr.* an ancient exercise or tournament, which was performed in the Roman amphitheatre, when strong athletic men were opposed to all sorts of enraged animals.

PANDOURS, are Hungarian infantry. They wear a loose garment fixed tight to their bodies by a girdle, with great sleeves, and large breeches reaching down to their ancles. They use firearms, and are excellent marksmen; they also wear a kind of sabre, near four feet long, which they use with great dexterity

PANIC, } sudden consternation
PANIC *fear*, } which seizes upon men's fancies without any visible cause; a needless or ill-grounded fright. The reason why these terrors are attributed to Pan, was, as some say, because when Osiris was bound by Typho, Pan and the satyrs appearing, cast him into a fright; or because he frightened all the giants that waged war against Jupiter: or as others say, that when Pan was Bacchus's lieutenant general in his Indian expedition, being encompassed in a valley, with an army of enemies, far superior to them in number, he advised the god to order his men to give a general shout, which so surprised the opposite army, that they immediately fled from their camp. And hence it came to pass, that all sudden fears impressed upon men's spirits, without any just reason, were, by the Greeks and Romans, called *panic terrors*. (See Polyænus Stratag. book 1.) The custom of shouting seems to have been used by almost all nations, barbarous as well as civil; and is mentioned by all writers who treat of martial affairs. Homer has several elegant descriptions of it, particularly one in the fourth Iliad, where he resembles the military noise to torrents rolling with impetuous force from the mountains into the adjacent vallies. We have likewise had our war-hoops.

PANIER *à mine*, Fr. See BOURRIQUET.

PANIERS, *Fr.* Baskets. Figuratively, *un panier percé*, a leaky vessel, or one who cannot keep a secret. A dangerous man in society: and in military concerns, one who ought to be particularly guarded against where discretion and confidence are necessary.

PANIQUE, *Fr.* See PANIC.

PANNE, *Fr.* literally means shag, plush, &c. and is properly a sea term, signifying to *lie to*, *mettre en panne*. It is likewise used in a military sense, to express the steady posture of troops who are drawn up for battle, and wait an enemy's attack. *La troupe est restée en panne.* The squadron remained immoveable.

PANNEAU, *Fr.* Trap, snare.

Donner dans le PANNEAU, *Fr.* to be ensnared, or outwitted.

PANNELS, in *artillery*, are the carriages which carry mortars and their beds upon a march.

PANNONCEAU, *Fr.* an ancient term, which was used to signify *ensign* or *banner*.

PANOPLY, complete armor or harness.

PANSEMENT, *Fr.* The dressing of wounds.

PANSER, *Fr.* to dress a wound.

PANSER, *Fr.* in farriery, signifies to rub down, and otherwise to take care of a horse.

PANTHEON, in architecture, a temple of a circular form, dedicated to all the gods. The name has been adopted among modern nations from the Pantheon of ancient Rome, built by Agrippa in his third consulate, and dedicated to Jupiter Ultor, or Jupiter the avenger. There is a chapel in the Escurial in Spain, called Pantheon, of marble and jasper inlaid: the whole inside is of black marble, excepting the luthern, and some ornaments of jasper and red marble. The Pantheon at Paris during the progress of the French revolution, has been appropriated to national purposes; the names and busts of the most distinguished statesmen and generals being preserved therein as marks of public gratitude, and objects of public emulation. There is a building in London that bears the name of Pantheon, but that is all. It is private property, and the only public use to which it has been appropriated, has been that of operatical speculation, masquerades, or frivolous entertainments.

PANTOGRAPHE, *Fr.* a mathematical instrument, which serves to copy all sorts of drawings. The French have paid great attention to the improvement of this instrument, of which a minute description may be found in *Cours de Mathématiques*, by Pere Deschalles. But the sieur Panglois brought it to such perfection in 1750, that it is become universally useful.

PANTOMETER, an instrument used to take all sorts of angles, distances and elevations. It was invented by the ancients, but has been greatly improved since.

PANTOMETRE, *Fr.* See PANTOMETER.

PAPIER *de cartouche*, Fr. Paper used for cartridges.

PAPIER *gris, ou* PAPIER *brouillard*, Fr. Whited-brown paper.

PAPIERS *et enseignemens*, Fr. All the papers and manuscripts which are found on board a ship are so called.

PAQUEBOT, *Fr.* a modern French term, derived from packet-boat, which see.

PARABOLA, in *geometry*, a figure arising from the section of the cone, when cut by a plane parallel to one of its sides.

From the same points of the cone, therefore, only one parabola can be drawn; all the other sections within these parallels being ellipses, and all without hyperbolas.

Properties of the PARABOLA. The square of an ordinate is equal to the rectangle of the abscissa, and four times the distance of the focus from the vertex.

The perpendicular on the tangent, from the focus, is a mean proportional between the distance from the vertex to the focus, and the distance of the focus from the point of contact.

All lines within the parabola, which are drawn parallel to the axis, are called diameters.

The parameter of any diameter is a right line, of such a nature that the product under the same, and the abscissa, are equal to the square of the semi-ordinate.

The squares of all ordinates to the same diameter, are to one another as their abscissas.

Cartesian PARABOLA, is a curve of the second order, expressed by the equation $xy=ax^3+bx^2+cx+d$. containing four infinite legs, being the 66th species of lines of the third order, according to sir Isaac Newton: and is made use of by Descartes, in the third book of his geometry, for finding the roots of equations of six dimensions by its intersections with a circle.

Diverging PARABOLA, a name given by sir Isaac Newton to five different lines of the third order, expressed by the equation $yy=ax^3+bx^2+cx+a$.

PARABOLE, *Fr.* See PARABOLA.

PARABOLOIDE, *Fr.* See PARABOLIC CONOID.

PARADE, originally consisted of a square court before cathedrals, surrounded with piazzas or porticoes for persons to walk under, being supported with pillars. It is now used in a military sense, to signify any place where troops assemble, and may be distinguished in the following manner:

General PARADE, the place where soldiers belonging to different corps are drawn up, according to seniority, to mount guard, or to be exercised, &c.

Regimental PARADE, the place where any particular regiment or corps is formed in line, &c.

Private PARADE, any spot selected, in general by each captain of a troop or company, for the inspection of his men, previous to their being marched off to the regimental parade. This parade is likewise called company or troop parade. When troops are encamped, the general and regimental parades are usually in front of the line of tents; each regiment having its quarter-guard opposite, and the space between being sufficient to allow of the free exercise of the battalion. The companies have their private parades in the several streets of the camp.

PARADE, *in camp*, is that spot of ground in the front of each encampment, between the camp colors, on the right and left wings.

Morning PARADE. In every garrison town, fortified place and camp, as well as in every town through which soldiers pass, or occasionally halt, a certain hour in the morning is fixed for the assembling of the different corps, troops, or companies, in regular order.

Evening PARADE. The hour generally fixed for the evening parade is at sunset. When troops are encamped, the signal for evening parade is given from the park of artillery, by the discharge of a piece of ordnance, which is called the evening gun.

To PARADE, to assemble in a prescribed regular manner, for the purposes of being inspected, exercised, or mustered.

To PARADE. This word is frequently used as an active verb, with respect to military matters, viz. *to parade the guard*, &c. It has likewise been adopted in Ireland to express the act of calling out a person in an affair of honor. The Irish familiarly say—*I shall parade the gentleman to-morrow morning in the Phœnix Park.*

PARADE, *Fr.* The French make use of this term in various ways.

PARADE, *Fr.* Show, ostentation.

Lit de PARADE, *Fr.* Bed of state.

Cheval de PARADE, *Fr.* a horse finely caparisoned, and kept for show.

PARADE, *Fr.* in fencing, the act of parrying a thrust or blow.

PARADE, *Fr.* the place or ground where soldiers parade.

Se mettre en PARADE, *Fr.* to take one's ground.

Faire la PARADE, *Fr.* To do parade duty.

Monter la PARADE, *Fr.* To take part in the regular line of parade.

Manquer sa PARADE, *Fr.* in fencing, to miss one's party.

Etre hors de PARADE, *Fr.* to parry wide, or stand exposed.

PARADIS, *Fr.* that part of a harbor in which vessels may ride with the greatest safety.

PARALLELES, *Fr.* Parallel lines in fortification are so called. See PARALLELS.

PARALLELS, at a seige, the trenches or lines made parallel to the defence of the place besieged: they are also called lines of communication, and boyeaus.

PARALLELS, or places of arms, are deep trenches 15 or 18 feet wide, joining the several attacks together. They serve to place the guard of the trenches in readiness to support the workmen when attacked. There are usually three in an attack; the first, about 300 toises, or 600 yards, from the covert-way: the 2d and 3d, nearer to the glacis.

PARALLELIPIPED, (*Parallelopepide*, Fr.) one of the regular bodies of solids, comprehended under six rectangular and parallel surfaces, the opposite ones whereof are equal.

Tirer une PARALLELE, *Fr.* verbatim, to draw a parallel. To make a direct communication between one trench and another.

PARALLELISM, the situation or quality whereby any thing is denominated parallel.

PARALLELISM *of a march.* In order to preserve the parallelism of a march in the movement of troops, each battalion must be kept perpendicular to the direction it marches upon, the whole of the several battalions in one straight line, and their several marching directions parallel to each other. The first battalion or line becomes the regulating one, and must be regarded as infallible; and from the moment that its direction is ascertained, the commander of each other, and their directing serjeants, are to consider their movements as subordinate to it, and to conform accordingly. It is the helm which guides the line, and must not change cadence; nor will it increase or diminish its speed, but from unavoidable necessity, and by particular order.

The instant communication of the word march is particularly important, that the advanced guides of the whole may step off together, and thereby maintain their line parallel to the one they quitted, and which becomes the principal guide for their battalions; each preserves its six paces from its advanced guide; this distance is to be kept by, and depends on, the replacing officer next to the color, who covers the directing guide; and if these trained guides do step equally, and in parallel directions to each other, they must be dressed themselves in line, and of consequence the centres of their following battalions.

PARALLELISM *and distance* to be observed in the formation and movement of any considerable body of troops. It is laid down as a general maxim, that no considerable body should ever be formed without a proportion of it being placed in *reserve* or in *second line*, and more or less according to circumstances. The movements of such second line will always correspond with those of the first, and it will always preserve its parallelism and distance.

If the first line makes a flank or central change of position, the second must make a change also on such point as will bring it into its relative situation.

The march of the second line in front, is regulated by its own division or battalion of direction, which moves relatively to that of the first line. In forming in line it will march upon its own points which are parallel to, and ascertained in consequence of those of the first.

When the lines break into columns to the front, the second will generally follow those of the first. When the march is to the flanks, the second line will compose a separate column, or columns. When the march is to the rear, the second line will lead in columns.

The distance betwixt the lines, may be in general supposed equal to the front of one or two battalions, and an interval.

The second lines are seldom composed of as many battalions as the first: they are often divided into distinct bodies, covering separate parts of the first line, and consequently preserving a relative parallelism and distance.

Second lines should not always remain extended, they may often be formed in column of battalions, or of greater numbers, ready to be moved to any point where their assistance is necessary.

Whenever the first line breaks, and manoeuvres by its right to face to the left, or by its left to face to the right: the movements of the second line are free and unembarrassed, and it may turn round the manoeuvring flank of the first line, and take its new position behind it, by extending itself parallel to that direction, how oblique soever it may be.

The central movement generally required from the second line to conform to that of the first, is equivalent to that line marching in two columns of platoons, from near the centre obliquely to the front, and from that situation forming to both flanks.

The movements of the central columns being well understood, those of the battalions of the wings, are similar in two lines.

The officer commanding the second line, must always be properly informed of the nature of the change to be made by the first, that he may readily determine his corresponding movements.

It requires much attention to conduct heads of battalion columns of both lines nearly parallel to their lateral ones, and perpendicularly, or diagonally to front or rear, according to the nature of the movement. To determine with precision, and in due time, their points in the new line, that wavering and uncertainty of march may be avoided. In great movements to allow the soldier every facility of motion without increasing the distances of divisions, and to require the most exact attention on entering the new line, and in forming. To avoid obstacles in the course of marching, but as soon as possible to re-enter the proper path of the column, while out of that path, the colors of that battalion column may be lowered, (as a mark for the neighboring column, not to be then entirely regulated by it) and again advanced when it regains its proper situation.

All the battalions of a second line, must at the completion of every change of position, find themselves placed in the same relative situation with respect to the first, as they were in before the commencement of the movement.

All changes of position of a first line are made according to one of the modes already prescribed: in general, in critical situations, they are made on a fixed flank, or central point, and by the echellon march of platoons or echellons of smaller sections than platoons, where ground and other circumstances require it; and the echellons may upon occasion be each marched in file, but keeping its position: but the movements of a second line being protected, more complicated, and embracing more ground, are made by the march of battalion columns regulated by a certain determined division of the line.

In all cases where a change of position

is made on a flank or central point of the *first line*, the movement of its *corresponding* point of the second line determines the new relative situation of that second line.

Movements Parallel *with a line of fire*. Movements are said to be parallel with a line of fire, when one or more lines march either in the rear of troops engaged with an enemy, or in face of an enemy, who is advancing to attack. The greatest accuracy and order are required on both occasions, particularly on the latter; for if the second line, which is the line of support, does not preserve its perpendicular direction with respect to every leading point, and its relative parallelism and distance with the line engaged, according to circumstances, it will not only run the risk of becoming useless itself, but will in all probability endanger the line it covers, should any sudden necessity occur for a change of position.

PARALLELOGRAM, (*Parallelogramme*, Fr.) a plain figure bounded by four right lines, whereof the opposite are parallel one to the other. It likewise means an instrument composed of five rulers of brass or wood, with sliding sockets, to be set to any proportion, for the enlarging or diminishing any map or draught.

PARALYSER, *Fr.* To paralyse. A term frequently used by the French since the revolution, to express the bad effects of a factious spirit, &c. *Un seul factieux quelque fois paralyse toute une administration*: one factious man will sometimes render the designs of a whole administration abortive.

PARAMETER. See Gunnery and Projectiles.

PARAPET, in *fortification*, an elevation of earth, designed for covering the soldiers from the enemy's cannon, or small shot; its thickness is from 18 to 20 feet; its height 6 on the inside, and 4 or 5 on that side next the country: it is raised on the rampart, and has a slope called the superior talus, or glacis of the parapets, on which the troops lay their arms to fire over The slope renders it easy for the soldiers to fire into the ditch. It has a banquette or two on the inside for the troops who defend it, to mount upon, for better discovering the country, the ditch, and counterscarp, to fire as they find occasion.

Parapet *of the covert-way*, is what covers that way from the sight of the enemy; which renders it the most dangerous place for the besiegers, because of the neighborhood of the faces, flanks, and curtains of the place.

PARAPETS *en forme de crémaillere*, Fr. Parapets which are so constructed within, in the form of a saw, that one of the faces of the redans, or teeth, is perpendicular and the other parallel to the capital The chevalier Clariac, in his *Ingénieur de Campagne*, has given a particular account of these parapets. But the merit of having invented them does not entirely rest with him, since the Marquis de la Fond, director of the fortified places upon the coast of French Flanders, and M. de Verville, chief engineer at Rocroi, have likewise mentioned them.

PARASANG, (*Parasange*, Fr.) an ancient Persian measure, being usually thirty, sometimes forty, and sometimes fifty stadia or furlongs.

PARC *d'artillerie*, Fr. See Park of Artillery.

Parc, *Fr.* See Park.

Le Commissaire du Parc, *Fr.* The commissary belonging to the park.

Le Parc *des munitions et des vivres*, Fr. The park of stores and provisions.

Parc *d'Hôpital*. See Hospital.

Parc *des vivres ou quartier des vivres*, Fr. Park of provisions, which see.

PARCOURIR, *Fr.* in a military sense, to run over the ground during an action. This word is particularly applicable to those movements which are made by general officers, officers commanding brigades, &c. for the purpose of encouraging their soldiers in the heat of an engagement.

Parcourir *de rang en rang*, Fr. to run up and down the ranks, or from rank to rank.

PARDON, forgiveness, remission. In military matters this word must be understood in two senses, viz. in a limited one, when it affects a culprit who has been sentenced by a general court-martial, to receive punishment; and in a more extensive one, when the punishment is the consequence of a regimental decision. In the former case, the president only, through the war department, can pardon or remit the punishment; in the latter, the colonel, or commanding officer, has a discretionary power.

PARER, *Fr.* to parry,

Parer *à toutes feintes*, Fr. To parry to all feints.

PARK *of artillery*, should always be placed if possible within a short distance of water carriage; and have the most ready communication with every part of the line of the army. Its form must depend on its situation. Ten feet are usually allowed in front for one carriage and its interval, and near 50 feet from the hind wheels of the front row to the fore wheels of the second; this interval should allow sufficient room for putting the horses to the carriages, and for a free passage along the line. In parks not on immediate service, it is customary to arrange the guns with their muzzles to the front; but where the guns are likely to be wanted at a short notice, appearances must not be studied, and the gun carriages must be parked with their shafts to the front, ready to receive horses to them. A quarter guard is placed in front of the park, and the non-commissioned officers and gunners' tents on the flanks, at about 20 paces distance; and 40 paces to the rear of the subaltern officers; at 10 more to the rear the captains, and 10 more the commanding officer. The mess tent is 15 in the rear of the officers. At a convenient distance, in the rear of the whole, are the horses, picketed in one or more lines, with the drivers on their flanks. The horses are sometimes picketed in lines perpendicular to the front, and on the flanks of the carriages, between the men and the carriages. See Camp and Artillery in the Field. *Am. Mil. Lib.*

Park *of provisions*, a place in a camp, on the rear of every regiment, which is taken up by the sutlers who follow the army with all sorts of provisions, and sell them to the soldiers.

PARLEMENTER, *Fr.* to parley. The French familiarly say, *Ville qui parlemente est à demi rendue;* a town whose governor parlies may be said to be half given up.

PARLEY, oral treaty, talk, conference, discussion by word of mouth.

To Parley, in military matters, to enter into conference with your enemy. This is done by means of a flag of truce. See Truce.

To beat a Parley, is to give a signal for holding such a conference, by beat of drum, or sound of trumpet. See Chamade.

PAROLE, in a *military sense*, the promise made by a prisoner of war, when he has leave to go any where, of returning at a time appointed, or not to take up arms, if not exchanged.

Parole, means also a word given out every day in orders by the commanding officer, both in camp and garrison, in order to know friends from enemies.

PARQUER, *Fr.* This word, which signifies to lodge and place any thing in a convenient and safe manner, is used by the French both in an active and passive sense.

On Parquera *l'artillerie, ou l'artillerie fut parquée en tel endroit*, Fr. you will park the artillery in such a quarter, or the artillery will be parked in such a quarter.

Les gens de l'artillerie se parquèrent, ou furent parqués, du côté de la rivière, Fr. The train of artillery parked itself on the banks of the river, or was parked upon the banks of the river.

L'artillerie parquoit en tel lieu, Fr. The artillery parked on such ground.

PARRAIN, *Fr.* means, literally, a godfather In a military sense, it formerly signified a second or witness who attended at single combats to see fair play. *Les combattans se trouvérent dans le lieu du combat, chacun avec son parrain.* The combattants met upon the ground, each attended by his second or witness.

Parrain, *Fr.* in military orders, the person who introduces, or presents a newly elected knight. The term is also used to signify the comrade who is selected by a soldier that has been condemned to be shot, to bind the handkerchief over his eyes.

PARRYING, the action of warding off the push or blow aimed at one by another.

Etre à la Part, Fr. a marine term among the French, signifying, to share in the prizes which are made against an enemy.

PARTHENIÆ, a word derived from the Greek, signifying virginity. In military history it refers to a particular circumstance which occurred among the ancients. The Spartans having been at war with the Messenians for 20 years, and having by that means very much depopulated their country, and apprehending that if this war continued, it might eventually strip Sparta of all its male inhabitants, they sent some of their young men from the army into the city, with licence to be familiar with as many unmarried women as they would; and the children begotten by them in this manner were called Partheniæ, on account of the uncertainty who were their fathers. At the end of the war this brood were deemed bastards, and were denied the bearing of any office in the government, &c This unjust exclusion enraged them so much, that they conspired with the slaves to destroy all the nobility; but on the discovery of their plot, they were driven out of the city. After which, being headed by Phalantus, a bold and enterprising son of chance, they travelled into *Magna Grecia* in Italy, and built *Tarentum.—Bailey's Dict.*

PARTI, *Fr.* See Party.

Parti-*Bleü*, Fr. any party of armed men who infest a country, and have no regular permission to act offensively.

Prendre le Parti, *Fr.* to take a part.

Prendre son Parti, *Fr.* to come to a determination.

Prendre son Parti *dans les troupes*, Fr. To list in a regiment.

Tirer Parti, *Fr.* to take advantage.

Ne point prendre de Parti, *Fr.* to remain neuter, or not to take any part.

Esprit de Parti, *Fr.* party spirit.

Se delarer d'un Parti, *Fr.* openly to avow some particular party. The French say figuratively, *Il faut être toujours du parti de la verité;* we should always side with truth.

Parti, likewise signifies profession or employment, viz. *Le parti de l'épée, le parti des armes*; the military profession.

Prendre Parti *dans l'épée*, Fr. to embrace a military life.

PARTIALITY. Unequal state of the judgment, and favor of one above the other, without just reason. If any member of a general court-martial expresses a previous judgment, in partiality either to the prisoner or prosecutor, before he is sworn, it is to be deemed a good cause of challenge; and he should not be allowed to sit in judgment on the case.

PARTISAN, has been applied to a

halberd or pike, and to a marshal's staff. See Baton.

PARTISAN, in the *art of war*, a person dexterous in commanding a party; who, knowing the country well, is employed in getting intelligence, or surprising the enemy's convoy, &c. The word also means an officer sent out upon a party, with the command of a body of light troops, generally under the appellation of a partisan corps. It is necessary that this corps should be composed of infantry, light-horse, and riflemen.

PARTY, in a *military sense*, a small number or detachment of men, horse, or foot, sent upon any kind of duty; as into an enemy's country, to pillage, to take prisoners, and oblige the country to come under contribution. Parties are often sent out to view the roads and ways, get intelligence, seek forage, reconnoitre, or amuse the enemy upon a march; they are also frequently sent upon the flanks of an army, or regiment, to discover the enemy, if near, and prevent surprise or ambuscade.

Parties escorting deserters in the British service receive the following allowances, being the same as have been granted to those of other forces, in consideration of the unavoidable extraordinary wear of their clothing and necessaries on that duty, viz.

Distances from quarters.		For each man £.	s.	d.
Between 8 and	20 miles	0	1	0
20	50	0	2	0
50	100	0	4	0
100	150	0	5	0
150	200	0	6	0
Above 200		0	7	6

In the like proportion, allowances are to be made for parties of four, five, and six men, but no higher. This is however to be understood as a regulation of allowance merely, it not being the intention of government thereby to restrain any commanding officer from employing larger parties on the escort duty, if he should think proper, but that whatever may be the actual number of the parties, the allowances are to be in the proportion of

Three men for an escort of -	from 5 to 8 deserters
Four————	from 9 to 12
Five————	from 13 to 16
Six————	from 17 to 20

Exact returns of the said duty, as performed by each corps, are to be made up, agreeable to a form annexed, as soon as may be after every 24th of June and 24th of December, for the half years immediately preceding, and are to be transmitted to the office of the secretary at war, in order that the allowances thereon may be settled and directed.

Watering PARTY. See Watering.

Firing PARTY, those who are selected to fire over the grave of any one interred with military honors, if below the rank of brigadier-general; for the specific number of which the party is to consist, &c.—See Burials.

Working Parties. These consist of small detachments of men under the immediate command and superintendance of officers who are employed on fatigues which are not purely of a military nature. They are generally called fatigue duties, being different from those of parade, or of exercise in the field. They principally consist in digging canals, repairing roads, working on fortifications, except such as may be constructed in the field, or upon actual service. An addition is made to their pay, as a reward for their labor, and a compensation for their extraordinary wear of necessaries: half of which should always be paid into the hands of the captains, and commanding officers of companies, for this latter purpose. It has been judiciously observed in a note to the treatise on Military Finance, that British troops might in time of peace, be employed much oftener than they are on works of this nature, with equal advantage to the public and to themselves. This remark becomes more forcibly apposite since the adoption of canals through the country.

PAS, *Fr* Pace. A measure in fortification. The French divide their *pas*, or pace, into two kinds—*pas commun*, or ordinary pace, and *pas geometrique*, or geometrical pace. The ordinary pace consists of two feet; and the geometrical pace contains five royal feet, or five *pieds du roi*. The itinerary distance which the Italians call a mile, consists of one thousand geometrical paces; and three miles make a French league.

Pas *oblique*, Fr. Oblique step, now exploded.

Pas *ordinaire*, Fr. Ordinary time.

Pas *ordinaire direct*, Fr. Front step in ordinary time.

Pas *precipite*, Fr. Double quick time.

Pas *de charge*, Fr. Charging time.

Pas *cadencé*, Fr. Cadenced step.

Doubler le Pas, *Fr.* to double your step or pace: to go faster.

Forcer le Pas, *Fr.* to make a forced march.

Pas *alongé*, Fr. a lengthened step.

Alonger le Pas, to step out.

Diminuer le Pas, *Fr.* To step short.

Hâter le Pas, *Fr*, to slacken your pace; to go slower.

Marcher à grands Pas, *Fr.* To move rapidly.

Marcher à petits Pas, *Fr.* to step short, or move leisurely.

Returner sur ses Pas, *Fr.* To go back.

Avoir le Pas, *Fr.* To have the precedency.

Pas *de souris*, Fr. Degrees or steps which are made in different parts of the circumference of the counterscarp:—They serve to keep up a communication between works when the ditch is dry, and are generally made in the rentrant angles of the counterscarp, and in the rentrant angles of the outworks. There are likewise steps or degrees of this sort at some distance from the glacis.

Pas, *Fr.* Any strait or channel of water between two separate lands.

Pas *de Calais*, Fr. The straits between Calais and Dover.

Pas, likewise signifies any narrow pass. *Le pas des Thermopyles.* The pass of Thermopylæ

Defendre le Pas, *Fr.* To defend the pass or strait.

Francher le Pas, *Fr.* To determine upon a thing after some hesitation.

Pas *d'ane*, Fr. A sword-guard, which covers the whole hand, or basket hilt. *Une garde à pas d'ane.*

Pas *d'ane*, Fr. This word likewise means a curb or snaffle.

PASS, in a *military sense*, a strait, difficult, and narrow-passage, which shuts up the entrance into a country.

PASS, a voucher for the absence of a non-commissioned officer or soldier, in the following form:

By——————commanding the——— regiment of U. S. Infantry, stationed at ——————.

Permit the bearer hereof———in——— company of the abovementioned regiment, to pass from hence to————and to return to quarters at or before———— o'clock.

Given under my hand at————this ————day of————.

To all whom it may concern.

PASS, PASSADO, in *fencing*, a push or thrust upon your adversary.

Pass, (*passade*, Fr.) in fencing, a leap or advance upon the enemy.

To Pass, to march by open order of columns, for the purpose of saluting a reviewing general. Each division or company (on its march) will open its ranks at 20 paces distance from the general, and again close them, after it has passed 15 paces. The whole march in slow time, till the leading division arrives at the spot where the left of the battalion originally stood. The commanding officer then halts the regiment, the music ceases to play, and the different divisions with supported arms march in quick time until they have completed the third wheel from the ground of original formation; when arms are ordered to be carried, the music plays, and as each division completes the third wheel, the officers shift to the right, and the whole pass the general.

Pass *of arms.* In ancient chivalry, a bridge, road, &c. which the knights undertook to defend, and which was not to be passed without fighting the person who kept it. He, who was disposed to dispute the pass, touched one of the armories of the other knight who held the pass, that were hung on pales, columns, &c. erected for the purpose; and this was a challenge which the other was obliged to accept. The vanquished gave the conqueror such prize as was agreed on.

Pass-*parole*, a command or word which is given out at the head of an army, and from thence passed from mouth to mouth, till it reach the rear.

Pass-*port*, a letter of licence which is given by a government, granting safe conduct to travel, enter, and go out of its territories without molestation; this is properly given to friends and neutral persons; and the safe conduct to enemies.

PASS, *All's Well*, a term used by a British sentry after he has challenged a person that comes near his post, and has given him the proper parole, watchword, or countersign. See Rounds.

PASSADE, *Fr.* See Pass.

Passade, in the *manege*, is a horse's walking or trotting in such a manner, that he raises the outward hind-leg and the inward fore-leg together; and, setting these two on the ground, raises the other two alternately, never gaining above a foot of ground at a time.

Demander la Passade, *Fr.* This term is used among the French to express the act of soliciting charity out of the usual way of persons begging, or who have not been accustomed to ask alms. *Donner la passade a un pauvre soldat*; to give alms to a poor soldier. *Il y avoit sur le chemin beaucoup de soldats qui demandoient la passade;* there were many soldiers on the road who asked charity.

PASSAGE, (*passage*, Fr.) This word, as to its general import, does not require explanation. It is familiar to every body. In a military sense it may be variously understood for passages made over rivers or through defiles, which should always be secured when an army is on its march. Dragoons or light cavalry are generally employed upon this service, being, by the celerity of their motions, better calculated to get the start of an enemy. Passes through mountainous countries, and passages over rivers, may likewise be secured by means of light field pieces and flying artillery. The latter are particularly calculated for defiles. Intrenching tools, &c. must be carried with them.

If it be found expedient to cross a river, a sufficient number of pontoons, must accompany the detatchment. Should the river be fordable, and a body of infantry have been brought up in time to act with the cavalry, the former must instantly make good its footing on the opposite side, carrying intrenching tools, &c. for the purpose of fortifying the *tête du pont*, and thereby securing the passage of the river. Rivers are crossed either by surprise, or by main force.

When the passage is to be effected by surprise, such movements and feints must be resorted to, as may induce the enemy to direct his means of opposition to a distant quarter from the one you have in contemplation. Every precaution must be taken to prevent him from getting the least intelligence respecting your boats of pontoons; and on this account you must frequently countermarch different bodies of troops to divert his attention. When the passage is to be effected by main force, you must take such a position as will enable you to command the one occupied by the enemy, and you must select that part of the river where there are small islands or creeks, under cover of which the boats and barges may ply.

Those spots upon the banks of a river are best calculated for this enterprise, where the stream forms a rentrant angle, because it is more easy, in cases of that sort, to plant your batteries in such a manner as to afford a cross fire against the opposite bank. The instant you have dislodged the enemy, by means of a superior force of artillery (which you must always provide for the purpose in question) a strong detachment composed of grenadiers, and other chosen troops, must cross in boats or barges, in order to stand the first shock of the enemy, under a well supported fire of artillery.

When this detachment has made good its footing, the boats or barges must instantly row back for fresh troops, whilst the pioneers, artificers, and workmen, who accompanied the grenadiers, throw up temporary redoubts, and are protected by the fire of the troops that have landed. As soon as the works are sufficiently advanced, and an adequate number of men has been distributed in them to secure the post, the bridge must be undertaken. Its head or tete must be made as strong as possible, to keep the enemy in check should he return, and endeavor to dislodge the advanced guard.

The main body must be put in motion shortly after the departure of the first detachment, in order to support the latter, should the enemy succeed in making a bold push to defeat it, and thereby prevent the numberless disadvantages which must ensue, if the army were permitted to cross the river, or to pass the defile without opposition.

When the passage of a large river can be happily effected by means of a bridge, considerable advantages may be derived from it; most especially when the army is thereby enabled to reach a defile or pass, the possession of which enables a general to distribute his troops in desultory quarters. Marshal Turenne, in his famous passage over the Wesel in 1672, has afforded us a strong instance of this advantage. Marshal Saxe has written largely upon this important operation; and every general officer ought to be thoroughly versed in the ways and means of executing it under all the various circumstances that occur in the locality of ground, the peculiar nature of rivers, and the possible resources of an enemy, that is determined to dispute his passage. But the most memorable of all that is recorded in history are the passages of the Danube below Vienna, in 1809, which merit the study of every military man.

Soldiers should be frequently practised in the different evolutions which are required to pass a bridge in a safe and military manner. Bridges, defiles, &c. being obstacles that retard the movements of an army, whose object is to advance, we refer our readers for a full elucidation of the subject, under the article **OBSTACLE**.

PASSAGE, *Fr.* a term which relates to the reception of a knight, in the order of Malta.

PASSAGE of bridges or defiles when a battalion or line stands on narrow ground.

A battalion, standing in narrow ground, may sometimes be ordered to march in file for the purpose of forming open column; and passing a defile, either before or behind that flank, before or behind the other flank, or before or behind any central point of that line.

Received Rules.

1. *If before the right flank*—The right platoon will move on, the rest of the battalion will face to the right, and march in file, the divisions will successively front and follow the leading one, and each other.

2. *If behind the right flank*—The whole face to the right and *march*, the right division instantly countermarches to the rear, *fronts*, and moves forward, followed in the same manner by every other division, till the whole is in column.

But the following method of passing in open column, would save a great deal of time which is unnecessarily lost by countermarching each division separately, as they successively arrive on the ground where the right division stood before it marched off to the rear.

1st. Countermarch the whole of the divisions at the same time, and on the same ground which they severally occupy in the line.

2d. Face the whole (except the right division) to the left, which moves forward on the word *march* from the chief. The divisions as they successively arrive on the ground from which the first division marched, will halt and *front*, follow the leading one and each other, till the whole are in column.

Received Rules.

3. *If before any central point, or the left flank*—The battalion makes a successive *countermarch* from the right flank towards the left, and when the right division arrives at the point from whence it is to advance, it again *countermarches* to its right,

a space equal to its front, then faces and moves on, and is thus successively followed by part of the battalion. The other part of the battalion beyond the point of advancing, *faces* inwards, when necessary, makes a progressive march in file, then fronts, and follows by divisions as it comes to the turn of each, till the whole are in column.

A different Method.

Instead of passing according to the above method, much time may be gained, by the divisions on the right of the defile facing to the left, (commencing with the right division) march in file till opposite, and in full front of the division which is opposite the defile, or where the column is to advance from, then front, march forward, followed by the other divisions; the divisions on the left of the defile will face inwards, and when necessary, make a progressive march in file, followed as before, till the whole are in column.

Received Rule.

4. *If behind the centre or the left flank.*—The right part of the battalion *countermarches* from the right by files successively by the rear; and the other part of the battalion, as is necessary, makes a progressive march by files from its right to the central point, and there begins to countermarch at that point, the leading and each other division, fronts into column, and moves on.

A different Method.

To avoid loss of time in countermarching the divisions on the left as they successively arrive at the point they march from. Countermarch those divisions first on the ground they severally stand on, then face to the *left*; and when it comes to their turn march in file, front, and following in column, as they progressively and successively arrive opposite the point where the right division entered the defile.

It must be observed that in all *countermarches* of divisions on the ground they severally stand on, when passing to the rear, the division which stands opposite the point from which they are to march, must *countermarch* at the same time with the other divisions. See *Am. Mil. Lib.*

PASSAGE *of Lines*. In narrow grounds, where there are redoubled lines, and in many other situations, it becomes necessary for one battalion to *pass* directly through another, in marching either to front or rear. This must particularly happen, when a first line, which has suffered in action, retires through, and makes place for a second line which has come forward to support it; or, the ond line remaining posted, when the falls back, and retires through it, us alternately, till a safe position is d.

PASSAGE *of the Traverse*, an opening out in the parapet of the covert-way, close to the traverses, that there may be a ready communication with all parts of the covert-way.

PASSAGE, in the manege, an action wherein the horse raises a hind and fore leg together; then setting these two on the ground, he raises the other two: and thus alternately, never gaining above a foot of ground at a time.

PASSAGE, *Fr.* to passage, a term used in the manege.

PASSAGER *un cheval*, Fr. to make a horse passage. It is likewise used as a neutral verb, viz. *un cheval passage*, a horse passages.

PASSANDEAU, *Fr.* an ancient piece of ordnance, which carried an eight pound ball, and weighed three thousand five hundred pounds.

Chemin PASSANT, *Fr.* a thoroughfare.

PASSAVANT, *Fr.* a pass. This term is not used in a military sense, but relates chiefly to commercial matters.

PASSE, *Fr.* See PASS.

PASSES-*Balles*, Fr. boards or machines made of iron or brass, used in disparting cannon, and fitted to every species of calibre.

PASSE-*Mur*, Fr. a piece of ordnance formerly so called, which carried a sixteen pound ball, and weighed four thousand two hundred pounds.

PASSE-*par tout*, Fr. a large saw, the teeth of which are irregularly made, for the purpose of cutting forest trees asunder.

PASSE-*par-tout*, Fr. a master key.

PASSE-*vogue*, Fr. Any extraordinary effort that is made in rowing is so called.

PASSE-*Parole*, Fr. This expression is used among the French in an absolute sense, and signifies to give the parole, order, or countersign. When troops are on service, or upon duty, they have frequent occasion to adopt it, especially during the rounds. *Avance passe-parole.* Advance, and give the parole or countersign.

PASSE-*Volant*, Fr. any man that is not really in the service, and who stands to be mustered for the purpose of completing the supposed number of effectives in a regiment, or on board a ship of war. They are likewise called *soldats prêtés*. *Borrowed soldiers*. During the existence of the old French government, the strictest regulations were made to prevent the gross impositions that were sometimes practised by means of *passe-volans* or faggots.

PASSE-*Volans* likewise means those wooden pieces of ordnance which are made to resemble real artillery, and fill up the vacant places in a ship. They were first adopted by the French, in consequence of a regulation which was made by M. de Pontchartrain, when he became minister of the marine department. He gave orders, that no vessels, except such as carried 16 guns, should sail to and from America. In order to comply, at least in outward appearance, with this regulation, the merchants had recourse to *pass-volans*, or wooden substitutes, they are called by us *quaker guns*. More advantages than one are indeed derived from this invention, which has been adopted in every civilized country.

Passe-*chevaux*, Fr. ferry for horses.

PASSER, *Fr.* to pass. This word has various significations both in French and English, but chiefly in the former language.

Passer *en revue*, Fr. to muster.

Passer *à compte*, Fr. to allow in reckoning.

Passer *au fil de l'épée*, Fr. to put to the sword.

Passer *par les baguettes*, Fr. to run the gauntlet.

Passer *par les armes*, Fr. to be shot.

Passer *à la montre*, Fr. to pass muster.

Passer *par la main du bourreau*, Fr. to be flogged, or otherwise punished, by the public hangman.

Passer *la riviere*, *passer la ligne*, Fr. to cross the river, to cross the line.

Passer *par les courroies*, Fr. to be picketed.

Passer *un homme à un officier*, Fr. to allow an officer the pay and subsistence of a private soldier for the maintenance of a servant. The term is also used to express the receipt of any public allowance for sinecure places.

Passer *sur le ventre à une armée*, Fr. to defeat an army.

PASSEUR, *Fr.* a ferryman.

PATACHE, *Fr.* This word sometimes means an advice boat; but it more generally signifies an armed tender, or a revenue cutter.

PATE, *Fr* in fortification, a sort of horse-shoe, that is, a platform, or terre-pleine, irregularly built, yet generally constructed in an oval form. It is surrounded by a parapet, without any thing to flank it, and having no other defence than what is front or fore-right. *Pates* are usually erected in marshy grounds to cover the gate of a fortified town or place.

PATERERO, a small cannon managed by a swivel.

PATIENCE, the power or faculty of suffering; indurance; the power of expecting long, without rage or discontent; the power of supporting faults or injuries, without revenge; long suffering. In military life patience is an essential requisite. Without patience half the toils of war would be insupportable; with patience there are scarcely any hardships but what coolness, courage, and ability may overcome. It is one of the greatest virtues, indeed, in an officer or soldier patiently to support, not only the rigor of discipline, but the keen and vexatious circumstances of disappc ment. Rousseau says, *La patienc amère, mais sont fruit est doux*. Pati is a bitter root, but its fruit is sweet

PATOMAR, *Ind.* a two mast ves each mast carries one sail of four equal sides. It likewise means a n senger.

PATRICIAN, from the Latin *tricius*, one descended from a noble mily. The term was used among Romans, to distinguish the higher c of the inhabitants of Rome from lower, who were called plebeians. I mulus, as soon as the city of Rome tolerably well filled with inhabita made a distinction of the people. T names Peter, Patrick, are from *pat* father; the Roman senate were ca *Patres* conscripti. See Patron.

Order of St. PATRICK. Then only one order of knighthood which longs to Ireland; it is that of St. I trick, and was created by Geo. III corrupt purposes.

PATRIOT, a sincere and unbias friend to his country; an advocate general civilization, uniting, in his c duct through life, moral rectitude w political integrity. Such a characte seldom found in any country; but specious appearance of it is to be seen e ry where, most especially in Euro It is difficult to say, how far the term be used in a military sense, although i not uncommon to read of a *citizen sold* and a *patriot soldier*. Individually c sidered the term may be just, but i hardly to be understood collectively.

PATROL, any party or round soldiers, to the number of five or s with a serjeant to command them Th men are detached from the main gua picquet, or quarter-guard, according circumstances, to walk round the stre of a garrison town, &c. for the purp of taking up disorderly persons, or su as cannot give an account of themselv It is their duty to see, that the soldi and inhabitants of the place repair to th quarters and dwelling-houses, (in co formity to specific directions which given out to that effect) and that alehou and sutlers' booths are shut up at a s sonable hour. They are likewise to ta up every person they meet without light, and that cannot give the watc word or countersign when he is challen ed. All such persons must be conduct to the guard-house, and a report made them to the commandant or governor the place, by the town-major.

Patroles are formed out of the i fantry as well as the cavalry. Whe weak place is besieged, and there is reas to apprehend an assault, strong patrol are ordered to do duty; these on foot ke a good look out from the ramparts, a those that are mounted take care of t outworks.

PATRON, one who countenances, supports, or protects. Every superior officer, from the commander in chief to the lowest non-commissioned officer, may, in a military sense, be called a patron; for it is the duty of all persons, in authority, to countenance, support, and protect every executive member in the service. Partialities on the other hand, (whatever may be their sources) are the bane of order and good discipline. In proportion as merit finds patrons among the good and great, indolence and inability should be discountenanced and degraded.

Kennett in his Roman Antiquities, page 97, has the following passage, on the origin of the word:—

Romulus, as soon as his city was tolerably well filled with inhabitants, made a distinction of the people according to honor and quality; giving the better sort the name of Patres or Patricii, and the rest the common title of Plebeii. To bind the two degrees more firmly together, he recommended to the patricians some of the plebians, to protect and countenance; the former being stiled *Patroni*, and the latter *Clientes*. The patrons were always their clients' counsellors in difficult cases; their advocates in judgments; in short, their advisers and overseers in all affairs whatever. On the other side, the clients faithfully served their patrons, not only paying them all imaginable respect and deference, but if occasion required, assisting them with money towards the defraying of any extraordinary charges. But afterwards when the state grew rich and great, though all other good offices continued between them, yet it was thought a dishonorable thing for the better sort to take any money of their inferiors. *(Vide Dionys. lib. 2, Liv. lib. 1. Plutarch in Romulo.)* Hence the origin of patrons. But the case is altered in modern times with respect to pecuniary interest. Gold, or something more solid in the sale of liberty and good sense, buys a patron now.

PATRON, *Fr.* Among the French the captain of a trading vessel is so named. There were likewise sea-faring men called *officiers mariniers*, who served on board the French ships of war, and who were entrusted with the management of sloops and barges. These were generally called patrons.

PATRONS, *(Galère patrons*, Fr.) The galley which was second in rank at Marseilles, was so called. It was commanded by the lieutenant-general of the gallies, who took precedence in that line in the same manner that the vice-admiral of the French fleet did among ships of war.

PATROUILLE. See **Patrol**.

PATTE, *Fr.* a term used in mining. When a well or excavation is made in loose or crumbling earth, and it becomes necessary to frame it in, the rafters must be laid horizontally to support the boards in proportion as the workmen gain depth. The ends of the rafters that are first laid, run ten or twelve inches beyond the borders of the well, for the purpose of sustaining the platform. These supports are called *Oreilles*; consequently, that every subsequent frame may be supported, the second is attached or made firm to the first by means of the ends of boards which are nailed together. In this manner the third is joined to the second, and the fourth to the third. These ends are called *pattes* or handles.

PATTE *d'Oie*, Fr. a term used in mining to describe three small branches which are practised, or run out at the extremity of a gallery. They are so called from their resemblance to the foot of a goose.

PATTERN, a part shewn as a sample for the rest. In a late regulation relative to the inspection of the clothing of the British army in general, it is particularly directed, that regular inspectors, or the inspectors for the time being, do view and compare with the sealed patterns the clothing of the several regiments of cavalry and infantry, as soon as the same shall have been prepared by the respective clothiers; and if the clothing appear to be conformable to the sealed patterns, the said inspectors are to grant two certificates of their view and approval thereof, one of which certificates is to be delivered to the clothier, to be sent with the clothing to the head quarters of the corps; and the other to be lodged with the clothing board, as the necessary voucher for passing the assignment of the allowance for the said clothing.

A **Pattern** *Regiment*, a phrase of distinction, which is applied to a corps of officers and soldiers, who are remarkable for their observance of good order and discipline.

PATURE, *Fr.* See **Forage**.

Patureur, *Fr.* *Forager*, one who goes on a foraging party.

PAVALUNGE, *Ind.* the name of a year.

PAUDSHAU, *Ind.* King

PAVESSADES, *Fr.* large portable hurdles, behind which the archers and bowmen were formerly posted. According to Froissart, these hurdles were used long before the reign of Philip Augustus, king of France. Father Daniel, the Jesuit, in his *Histoire de la Milice Françoise*, describes them as bearing the figure of a shield; but the chevalier Folard, in his *Commentaire sur Polybe*, informs us, that they were mantlets which were disposed in parallel or oblique lines, from the camp to the nearest works belonging to the *Corps de Place*, behind which the soldiers and artificers, &c. could in safety, make a small fosse or ditch that was sufficiently deep to preserve them strait and firm. Hurdles, constructed in this manner, were used during the operations of a regular siege; but when it was found expedient to insult a place, those of less dimension were adopted. Father Daniel describes the *Retranchment Portatif*, which was used many centuries before the days of Philip Augustus, under the latter head.

PAVILION, in *military affairs*. See Tent.

PAVILLON, *Fr.* See Tent.

Pavillon, *Fr.* Flag, standard, or colors.

Vaisser le **PAVILLON**, *Fr.* to strike, to yield

Vaisseau **Pavillon**, *Fr.* Flag ship.

Pavillon, *Fr.* This word likewise signifies the swell or broad part of a speaking trumpet.

PAULETTE, *Fr.* a certain tax or pecuniary consideration which all persons who held public situations under the old government of France, were obliged to pay at the commencement of every year, to the king. This enabled them to sell or dispose of their appointments, and to leave the amount to their heirs, if they happened to die in the course of the year. It is so called from *Paulet*, the name of the person who first suggested the measure.

PAVOIS, *Fr.* an ancient weapon of defence. It was the Clypeus or broad shield of the Greeks and Romans.

PAUSE, a stop, cessation, or intermission. It is essentially necessary for all officers to accustom themselves to a most minute observance of the several pauses which are prescribed during the firings. Accordingly the pause betwixt each of the firing words, *make ready—aim,—fire*, is the same as the ordinary time, viz. the 75th part of a minute, and no other pause is to be made betwixt the words.

In firing by *companies by wings*, each wing carries on its fire independent, without regard to the other wing, whether it fires from the centre to the flanks, or from the flanks to the centre. If there are five companies in the wing, two *pauses* will be made betwixt the fire of each, and the *make ready* of the succeeding one. If there are four companies in the wing, three *pauses* will be made betwixt the fire of each, and the *make ready* of the succeeding one. This will allow sufficient time for the first company to have again loaded, and shouldered at the time the last company fires, and will establish proper intervals betwixt each.

In firing by grand divisions, three pauses will be made betwixt the fire of each division, and the *make ready* of the succeeding one.

In firing by *wings*, one wing will make ready the instant the other is shouldering. The commanding officer of the battalion fires the wings.

In firing companies by *files* each company fires independent. When the right file presents, the next makes ready, and so on. After the first fire, each man as he loads comes to the recover, and the file again fires without waiting for any other; the rear rank men are to have their eyes on their front rank-men, and be guided by, and present with them.

When troops march to music, a *pause* in the mind before the latter strikes off, will contribute greatly to that uniformity of step, without which no line can move correctly. In some regiments the music does not play until one step has been taken. See Step off.

PAY, or *pay of the army*, is the stipend or salary allowed for each individual serving in the army; first established by the British government in the year 1660.

FULL PAY

Of the Officers, Non-commissioned Officers, and Privates in the British army.

Rank.	Life Guards.			Cavalry.			Foot Guards.			Infantry of the line			Artillery.					
													Horse.			Foot.		
	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.
Colonel	1	16	—	1	12	10	1	19	—	1	2	6		—		2	3	6
Colonel en Second		—			—			—			—		1	9	8	1	3	9
1st. Lieut. Colonel	1	11	—	1	3	—	1	8	6	0	15	11	1	5	8	—	19	9
2d. Lieut. Colonel		—			—			—		0	15	11		—		—	16	10
1st. Major	1	6	—	—	19	3	1	4	—	0	14	1	1	—	9	—	14	10
2d. Major		—			—			—						—			—	
Captain	—	16	—	—	14	7	—	16	6	0	9	5	—	15	4	—	9	11
Captain Lieutenant	0	11	—	—	9	—	—	7	10	0	5	8	0	10	—	—	7	—
1st. Lieutenant													0	9	—	—	6	—
2d. Lieutenant		—			—			—			—		—	8	—	—	5	—
Cornets	—	8	6	—	8	—		—			—			—			—	
Ensigns		—			—		—	5	10	—	4	8		—			—	
Pay-Master		—		—	15	—		—		—	15	—		—			—	
Quarter-Master	—	6		—	5	6	—	5	8	—	5	8	—	6	—	—	6	—
Adjutant	—	11	—	—	5	—		—		—	5	—	—	5	—	—	5	—
Surgeon	—	12	—	—	12	—	—	12	—	—	9	5	—	11	10	—	9	11

FULL PAY

Of the Officers, Non-commissioned Officers, and Privates in the British army. (Continued.)

Rank.	Life Guards.	Cavalry.	Foot Guards.	Infantry of the line	Artillery. Horse.	Artillery. Foot.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Assistant Surgeon	——	— 5 —	— 7 6	— 5 —	— 6 —	— 5 —
Veterinary do.	——	— 8 —	——	——	——	——
Serjeant-Major	——	——	——	——	— 3 4	— 3 2
Quarter-Master do.	——	——	——	——	— 2 10	——
Serjeant	——	— 2	— 1 10¾	— 1 6¾	— 2 4	— 2 2
Corporal	— 2 6¼	— 1 7¼	— 1 4¾	— 1 2¼	— 2 2¼	— 2 ¼
Bombardier	——	——	——	——	— 2 ¼	— 1 10½
1st. Gunner	——	——	——	——	——	— 1 7
2d. Gunner	——	——	——	——	— 1 5¼	— 1 3¼
Private	— 1 11¼	— 1 3	— 1 1	— 1 —	——	——
Farrier and Smith	——	——	——	——	— 3 4¾	——
Collar Maker } Wheeler }	——	——	——	——	— 2 ¾	——
Trumpeter } Drummer }	— 2 6	— 1 7	— 1 2¼	— 1 1¼	— 2 1¾	— 1 3¼

Full PAY. The pecuniary allowance which is made to officers and non-commissioned officers, without any deduction whatsoever. Since the abolition of arrears in the British service, which took place in 1797, commissioned and warrant officers, &c. receive their full pay, or daily subsistence. The private soldiers are subject to temporary deductions, for the purpose of appropriating part of their pay and allowances to the expence of their messes, including vegetables, &c. and to a stoppage not exceeding 1*s.* 6*d.* per week, for necessaries; which stoppage is to be accounted for monthly, as stated in their regulations of 1st September, 1795, and the remainder being 1*s.* 6*d.* must be paid weekly to each soldier, subject to the accustomed deduction for washing, and for articles to clean his clothing and appointments.

The full pay of the British army is given in advance on the 25th of every month, and accounted for to government by the several district and regimental paymasters, through army agents appointed for that purpose. For further particulars, see *Military Finance*, page 48, &c Non-commissioned officers and private soldiers serving as marines, are not liable to any deduction whatsoever from their full pay, on account of provisions. It will be further observed, that although the British army is now paid its full pay, in consequence of the abolition of the distinction between subsistence and arrears, that pay is nevertheless subject to the usual deductions on account of poundage, hospital, and agency. This will explain the mutilated appearance of the different rates of pay. Thus a captain of infantry, who is nominally supposed to receive 10*s.* per diem, gets only 9*s.* 5*d.* the 7*d.* going for the above deductions. The full pay of the subaltern officers has been very judiciously increased, but that of the captains, &c. remains as it was in the reign of Queen Anne. For the several rates of full pay, see *Military Finance*, page 66, &c.

Half PAY, (*Demi solde*, Fr.) a compensation or retaining fee which is given to officers who have retired from the service through age, inability, &c. or who have been placed upon that list in consequence of a general reduction of the forces, or a partial drafting, &c. of the particular corps to which they belonged. The half pay becomes due on the 25th of June, and on the 25th of December in each year, but it is seldom issued until three months after the expiration of each of those periods. The only deduction from the half pay is the poundage, two and an half per cent. See *Military Finance*, page 113.

Irish HALF-PAY. Every officer upon the Irish establishment, when reduced to half pay, must swear to, and sign the following certificate:

County of } ————————of foot, came
} this day before me, and made oath, that he is no otherwise provided for by any commission or employment, civil or military, in his majesty's service, than by half pay on the establishment of Ireland, and is on no other establishment of half pay.

Officer's } Sworn before me this
Name. } day of

N B. To be sworn in January April, July, and October, in every year.

PAY-MASTER, is he who is intrusted with the money, and has the charge of paying the regiment. He has no other commission in the line. His pay is 15*s.* per day.

District PAY-MASTER, an officer appointed for the better management of the interior concerns of the army, when the corps are detached in garrisons on duty, in several districts.

PAY-*Bills*. In the British army these bills are distinguished according to the nature of the service for which they are given. Every captain of a troop or company receives a regular weekly account from his serjeant, of money to be advanced for the effectives of such troop or company; and on the 24th day in each month he makes out a monthly one for the paymaster, who makes out a general abstract for the agent. The paymaster-general's estimate is likewise called the pay bill.

PAY-*Lists*. The monthly accounts, which are transmitted by the several regimental and district paymasters to their agents on the 25th of each month, are so termed.

PAY-*Rolls*, the same as pay-lists.

PAY-*Serjeant*. See SERJEANT.

PAYE, *Fr.* the pay of the troops.

PAYEN-*Ghaut*, Ind. the lower mountain. Ghaut is the general term for mountain.

PAYS, *Fr.* This word is variously applied by the French in a figurative sense: *Parler, ou juger a vue de Pays.* To speak or decide at random.

Gagner PAYS, (*vuider le pays*, Fr.) To leave a country. To go voluntarily into exile. *Gagner pays* likewise means to gain ground. *Avancer pays* may be used in the same sense.

Battre-PAYS, *Fr.* to speak wide of the subject.

Tirer-PAYS, *Fr.* a familiar phrase among the French, signifying to escape.

PAYS, *Fr.* country, locality, ground.

PAYS-*conquis*, Fr. This term was applied by the French to those countries and tracts of territory which had been ceded to France by treaty; as Lorraine; or had been conquered by force of arms; as Ypres, Tournay, Ghent, Ostend, and several other towns, from the reign of Louis XIII.

PAYS-*coupés*, Fr. Confined, inclosed, or intersected countries. Marshal Saxe has observed, that it is impossible to lay down any specific rule relative to the management of troops in countries of this description. An intelligent and able officer will be governed by the nature of the ground in which he is to act; and as under these circumstances, the contest will consist chiefly of a war of posts, and of desultory engagements, in which the most obstinate will be generally the most successful, it will be incumbent upon every military man to recollect, that he must never advance, without having previously secured means for a retreat, should that be judged expedient, and being constantly guarded on his flanks to prevent the fatal consequences of surprise and ambuscade. Although the latter precautions are principally attended to by the general of an army, every partisan or officer commanding a detachment, should be more or less alive to the many mischiefs which must ensue from carelessness and inattention. It would be superfluous to point out what troops are best calculated to act in a close or intersected country. Every military man must know, that mountainous and close countries, or intersected lands, are best adapted to light infantry manœuvres, and that cavalry can only act, with safety and effect, in an open country. The solidity of this observation has probably been the cause of so much improvement in light artillery, and in rifle corps. The latter, indeed, by the use which has been made of their particular weapon, and the desultory execution of it on service, have sufficiently shewn, that no army ought to move without them.

PAYSANS. *Fr. Peasants.*

PEACE, has been represented allegorically as a beautiful female, holding in her hand a wand or rod towards the earth, over a hideous serpent, and keeping her other hand over her face, as unwilling to behold strife or war. By some painters she has been represented holding in one hand an olive branch, and leading a lamb and a wolf yoked by their necks, in the other; others again have delineated her with an olive branch in her right hand, and a cornucopia, or horn of plenty, in her left.

A very celebrated temple was erected for the goddess of peace at Rome, which was furnished with most of the rich vases and curiosities taken out of the temple of the Jews at Jerusalem. In this temple she was represented as a fine lady, endowed with a great deal of sweetness and good-nature, crowned with laurel interwoven, holding a caduceus in one hand, and a nosegay of roses and ears of corn, in the other.

The temple of peace, built by Vespasian, was 300 feet long, and 200 broad. Josephus says, that all the rarities which men travel through the world to see, were deposited in this temple.

PEACE, (*Paix*, Fr.) rest, silence, quietness; the direct opposite to war; and when the latter prevails, the ultimate object of every contest. This word is frequently prefixed to the term establishment, to signify the reduced number of effective men, in the British army, according to the various formations of corps. Thus one regiment may be 1200 strong in time of war, and only 600 in time of peace. A regiment may also consist of several battalions, the 60th regiment for example has six battalions each of the strength of a regiment; that is from 1000 to 1200 men each. Whence arises the distinction between *war* and *peace* establishments. The standing army of Great Britain, according to law, consists of that force only which is kept up in time of peace, and which is confined to a specific number of regiments. Every regiment, beyond the regulated number, during a war is liable to be reduced; and all within it are said to be out of the break.

PEADA, *Ind.* a footman who carries a staff.

PECHE, *Fr.* Fishery.

PECTORAL, (*Pectoral*, Fr.) a breast plate. This word is derived from the Latin, *Pectorale*. Among the Romans the poorer soldiers, who were rated under a thousand drachms, instead of the lorica or brigantine, (a leathern coat of mail) wore a pectorale, or breast-plate of thin brass, about 12 fingers square. Some modern troops, such as the cuirassiers, &c. wear pectorals for the direct purposes of defence and bodily protection; but in general small ornamental plates with clasps, have been substituted.

PECULAT, *Fr*. See PECULATION.

PECULATE, PECULATION, the crime of pilfering any thing, either sacred or public, particularly public money, by a person who has the management or custody thereof. This crime is punishable in the heirs of the original delinquent. Under peculation may be considered not only the monies which are embezzled or misapplied by commissioned, non-commissioned, and warrant officers, but the public stores, provisions, arms, and ammunition, &c. which may be sold for private emolument. Occasional examples have been made by government, of a crime that cannot be too scrupulously watched, or too heavily punished, ought to deter individuals from sacrificing public integrity to private views. They ought to remember, that like the sword of Damocles, public scorn hangs over the head of every man whose accounts have not been finally audited and passed.

PECUNIA. Money. A deity in the heathen mythology; (though not a goddess personified among them) the most powerful ascendant the moderns know. The Romans held that she presided over riches, and that she had a son named *Argentinus*, whom they adored in the hopes of growing rich.

PECUNIUS, a deity of the ancient Prussians, in honor of whom they kept a fire of oak perpetually burning. A priest constantly attended, and if the fire happened to go out by his neglect, he was instantly put to death. When it thundered, they imagined that their grand priest conversed with their god, and for that reason they fell prostrate on the earth, praying for seasonable weather.

PEDERERO, PATTARERO, a Portuguese term, signifying a small sort of cannon, which is particularly used on the quarter deck of ships, to fire or throw forth stones, or broken iron, upon boarding parties. This word has been adopted both by the French and English.

PEDOMETER, (*Pedometre*, Fr.) a mathematical instrument, composed of various wheels with teeth, which by means of a chain fastened to a man's foot, or to the wheel of a chariot, advance a notch each step, or each revolution of the wheel, and the number being marked at the edge of each wheel, the paces may be numbered, or the distance from one place to another be exactly measured.

PEGS, pointed pieces of wood, used to fasten the cords of a tent.

PEIADAK, *Ind*. a guard to accompany a prisoner at large.

PEISA, *Ind*. Cash; or copper money.

PEER, *Ind*. Monday.

PELE-MELE, *Fr*. a French adverb, from which is derived the English term pellmell, signifying, confusedly, in disorder, in heaps, &c.

PELICAN, *Fr*. an ancient piece of artillery which carried a six pound weight of ball, and weighed two thousand four hundred pounds.

PELLE *de bois simple*, Fr. a wooden shovel.

PELOTE *à feu*, Fr. Pelote literally means the bottom of a pincushion, a ball, &c. It is here used to signify a species of combustible ball, which serves to throw light into a fosse or elsewhere. The composition is pitch one part, sulphur three parts, to one pound of saltpetre. The whole is well mixed together, and incorporated with tow, from which the pelotes are made.

PELOTON, *Fr*. Platoon.

Rompre le PELOTON, *Fr*. A platoon being generally considered as a subdivision, *rompre le peloton* signifies to break into sections.

Former le PELOTON, *Fr*. to double up or form subdivision.

PELOTONNÉ, *ée*, Fr. formed into a platoon.

PELOTONNER, *Fr*. to gather together, to get into groupes.

Se PELOTONNER, *Fr*. to form into a platoon.

PELTA, in antiquity, a kind of buckler, small, light, and more manageable than the Parma which was used by the Amazons, according to Virgil, and resembled the moon in his first quarter, according to Servius.

PENAL, (*Pénale, ale*, Fr.) any decree or law which subjects individuals, &c. to penalties. Hence *code pénal Les loix pénales*. The penal code, the penal laws. Thus in England a person professing the Catholic religion is not permitted to exercise his religion if a soldier; and a catholic cannot be a commissioned officer.

PENALTY. In a military sense, signifies forfeiture for non-performance, likewise punishment for embezzlement, &c. An officer found guilty of embezzling stores is cashiered; any person who harbors, conceals, or assists any deserter from the United States' service, is liable to a heavy penalty.

PENDULUM, in *mechanics*, any heavy body suspended in such a manner that it may vibrate backwards, and forwards, about some fixed point, by the force of gravity.

A pendulum is any body suspended upon, and moving about, a point as a centre. The nature of a pendulum consists in the following particulars. 1. The times of the vibrations of a pendulum, in very small arches, are all equal. 2. The velocity of the bob in the lowest point, will be nearly as the length of the cord of the arch which it describes in the descent. 3. The times of vibrations in different pendulums, are the square roots of the times of their vibrations. 4. The time of one vibration is to the time of descent, through half the length of the pendulum as the circumference of a circle is to its diameter. 5. Whence the length of a pendulum vibrating seconds in the latitude of London, is found to be 39 inches and 2-10ths; and of one half-second pendulum 9-8 inches. 6. An uniform homogeneous body, as a rod, staff, &c. which is 1-3d part longer than a pendulum, will vibrate in the same time with it.

From these properties of the pendulum we way discern its use as an universal chronometer, or regulator of time. By this instrument, also, we can measure the distance of a ship, of a battery, &c. by measuring the interval of time between the fire and report of the gun; also the distance of a cloud, by counting the seconds or half-seconds, between the lightning and the thunder. Thus, suppose between the lightning and thunder we count ten seconds; then, because sound passes through 1142 feet in one second, we get the distance of the cloud = 11420 feet. Again, the height of any room, or other object, may be measured by a pendulum vibrating from the top thereof. Thus, suppose a pendulum from the height of a room, or other object, vibrates once in three seconds; then say, as 1 is to the square of 3, viz. 9, so is 39.2 to 352,8 feet, the height required. Lastly, by the pendulum we discover the different force of gravity on divers parts of the earth's surface, and thence the true figure of the earth.

PENDULUMS. Pendulums for military purposes are best made with a musquet ball, and a piece of silk, or other small line. Their length must be measured from the centre of the ball to the end of the loop on which they are to swing. In a cylinder, or other uniform prism or rod, the centre of oscillation, from whence they must be measured, is at the distance of one-third from the bottom, or two-thirds below the centre of motion.

Pendulum's length in latitude of London, to swing

Seconds	——	——	39·1-8th.
½ Seconds	——	——	9·8
¼ Seconds	——	——	2·45

Length of Pendulums to vibrate Secon every fifth degree of latitude.

Degrees of Latitude.	Length of Pendulum.	Degrees of Latitude.	Length of Pendulum.	Degrees of Latitude.	Length of
	Inches.		Inches		Inc
	39,027	35	39,084	65	39,
5	39,029	40	39,097	70	39,
10	39,032	45	39,111	75	39,
15	39,036	50	39,126	80	39,
20	39,044	55	39,142	85	39,
25	39,057	60	39,158	90	39,
30	39,070				

Rule.—*To find the length of a pendu to make any number of vibrations, and* versa.

Call the pendulum making 60 vi tions the standard length; then say the square of the given number of vi tions is to the square of 60; so is length of the standard to the le sought. If the length of the pendu be given and the number of vibrat it makes in a minute be required; as the given length, is to the stan length, so is the square of 60, its vi tions in a minute, to the square of number required. The square roo which will be the number of vibrat made in a minute.

PENNANT, PENNON, a small or color.

Gentlemen PENSIONERS, (*Gen hommes Pensionnaires*, Fr.) a banc gentlemen, who guard the British ki person in his own house, and for that wait in the presence chamber. T were first instituted by Henry VII. T are usually forty in number. Thei ficers are, a captain, lieutenant, s dard-bearer, and clerk of the che Their ordinary arms are guilt pole-a Their pension is 100*l.* per annum; are usually called *beef-eaters*, from t usually fat appearance and indo habits.

PENTACAPSULAR, having cavities.

PENTAEDROUS, having five si

PENTAGON, in *fortification*, a fi bounded by five side, or polygons, w form so many angles, capable of b fortified with an equal number of tions. It also denotes a fort with bastions.

PENTAGRAPH, (*Pentagraphe*, An instrument whereby designs, may be copied in any proportion, wit the person, who uses it, being skille drawing.

PENTANGLE, A figure having angles.

PENTANGULAR. See PE GON.

PENTAPOLIS, in geography, a c

try consisting of five cities. This name was given, particularly, to the valley wherein stood the five infamous cities destroyed by fire and brimstone in Abraham's time. The most celebrated Pentapolis was the Pentapolis Cyrenica in Egypt, whose cities were Berenice, Arsinoe, Ptolemais, Cyrene, and Apollonia.

PENTASPAST, (*Pentapaste*, Fr.) An engine that has five pullies.

PENTATHLON. The five exercises performed in the Grecian games, viz. *leaping*, *running*, *quoiting*, *darting*, and *wrestling*.

PENTHOUSE, a shed hanging forward in a sloping direction from the main wall of a place.

PEONS, *Ind.* municipal foot soldiers. These men are chiefly employed to assist in collecting the revenues, and carry a pike or staff. Most persons in India keep servants, who wear a belt with the master's name. These are likewise called Peadahs.

PEOPLE, *of color*. Blacks, Mulattoes, so called. They form part of the British territorial army, and are distributed, in corps, among the West India islands.

PERAMBULATOR. See PEDOMETER.

PERCH, in mensuration, is ten feet long. See MEASURE.

PERCUSSION. The impression which a body makes in falling or striking upon another, or the shock of two moving bodies. It is either direct or oblique.

Direct PERCUSSION, is where the impulse is given in the direction of a right line perpendicular to the point of contact.

Oblique PERCUSSION. When it is given in the direction of a line oblique to the point of contact.

Centre of PERCUSSION. That point wherein the shock of the percutient bodies is the greatest.

PERCUTIENT, striking against or upon.

PERDU, a word adopted from the French, signifying to lie flat and closely in wait. It likewise means the forlorn hope.

A corps PERDU, *Fr.* Desperately.

A coup PERDU, *Fr.* At random.

Coup PERDU, *Fr.* Random shot.

PEREMPTORY. Whatever is absolute and final, not to be altered, renewed, or restrained. *Peremptory execution*, what takes place immediately.

PERE, *Ind.* See PEER.

PERFIDIOUS. Treacherous, false to trust, guilty of violated faith. Hence *a perfidious foe*. War, however melancholy in its effects, and frequently unjustifiable in its cause and progress, is nevertheless, among civilized nations, so far governed by certain principles of honor, as to render the observance of established laws and customs an object of general acquiescence. When two or more countries are engaged in a hostile contest, whatever belligerent party grossly deviates from those rules, is deservedly stamped with infamy, and justly called "a perfidious foe."

PERFIDIOUSLY, treacherously, falsely, without faith.

PERFIDY, want of faith, treachery.

PERGUNNA, *Ind.* A district.

PERIMETER, in geometry, the extent that bounds any figure or body. The perimeters of figures or surfaces, are lines; those of bodies are surfaces. In circular figures, &c. we use circumference or periphery instead of perimeter.

PERIOD. This word is frequently used in military accounts to express the intermediate time for which money has been issued to officers and soldiers.

Broken PERIOD, a term used in the returns and financial statements of the British army, when the regular distribution of pay is interrupted, or the effective force is lessened by the absence of one or more individuals, or by any other cause. A correct and faithful statement of broken periods is essentially necessary in every will regulated regiment, as not only the service but the public purse may be materially injured by the neglect, or embezzlement of individuals. Adjutants and pay-masters cannot be too scrupulously minute on this important head.

PERIPHERY, the circumference--as of a circle.

PERISTYLE, a circular range of pillars for the support or ornament of any building, &c. used in the ancient amphitheatres.

PERKERNUCKA, *Ind.* Petty officers are so called in India.

PERMANENT *Fortification*, is defined to be the art of fortifying towns, &c. so as to resist the attacks of an enemy, that makes regular approaches.

PERMANENT *rank*, a rank in the army, which does not cease with any particular service, or locality of circumstances; in opposition to *local* or *temporary rank*. See RANK.

PERPENDICULAR, (*Perpendiculaire*, Fr.) According to Vauban's system, it is a line raised in a perpendicular direction on the centre of the exterior side of any given polygon. In mean fortification, which prevails more than any other system; the perpendicular contains 30 toises in the exagon, and in polygons that have a greater number of sides; but it contains fewer when the polygons have a less number. The perpendicular is used by this engineer to determine the other lines and angles belonging to a fortification. In proportion as the perpendicular is increased, the extent of the flanks is augmented.

PERPENDICULAR *Fortification*, is that in which all the component parts flank each other at straight angles. Pagan, and other engineers, made the flanks perpendicular to the lines of defence. This is also the denomination of the improved system of Montalembert, which has superceded in a great measure all others; the distinction between this and the old, would require a treatise to exemplify it.

PERPENDICULAR, (*Perpendiculaire*, Fr.) When any star is vertical, it is said, in astronomy, to be perpendicular, because its beams fall directly upon us.

PERPENDICULAR, in geometry, when any right line is perpendicular to all the lines it meets with in a plane, it is said to be perpendicular to that plane.

PERPENDICULAR *direction*, in marching, is the regular and straight progress of one or more men over given points. Without the strictest attention is paid to this essential principal in all movements, the greatest irregularity, and, ultimately, the greatest confusion must ensue. Perpendicular and parallel movements, constitute, indeed, the whole system of good marching. When several columns, divisions, or companies, advance, the different pivots must be strictly perpendicular and parallel to each other, otherwise the distance will be lost, and the ultimate object of forming a correct line must be defeated.

PERPETUAL *screw*, a screw which is acted upon by the teeth of a wheel, and which continues its action for an indefinite length of time; or so long as the teeth of the wheel continue to act upon it.

PERQUISITES, all manner of profits arising from an office or place, independent of the actual salary or revenue. In a military sense no perquisites, advantages, or emoluments are allowed to persons in responsible situations.

PERSIAN *Language*, Ind. There are two sorts; the ancient, called Zebane-Pehlavy; the modern, called Zebaune-dery.

PERSPECTIVE, is the art of drawing the resemblances or pictures of objects on a plane surface, as the objects themselves appear to the eye, &c.

PERSPECTIVE *Elevation*. See SCENOGRAPHY.

PERUST, *Ind.* A small weight or measure, equal to four koodups or puls.

PERWANNA, *Ind.* an order, warrant, or letter, signed by a Nawaub or Nabob, a passport; a custom-house permit, as in the case of the Neyau and vizier.

PESHWA, *or* PAISHWA, *Ind.* prime minister; the acting head of the Mahrattah states. Paishwa became the title of a sovereign, the head of the Mahrattahs.

PESTLE, an instrument used in the fabrication of gunpowder. See GUNPOWDER MILL.

PETARDEAUX, *Fr.* Pieces of wood, covered with wool and pitch, which are used to stop the holes that are made in the sides of a ship by cannon ball, during an engagement.

PETARD, *or* PETARDO, an engine to burst open the gates of small fortresses: it is made of gun-metal, fixed upon a board two inches thick, and about 2 1-2 feet square, to which it is screwed, and holds from 9 to 20 pounds of powder, with a hole at the end opposite to the plank to fill it, into which the vent is screwed: the petard thus prepared is hung against the gate by means of a hook, or supported by three staves fastened to the plank: when fired it bursts open the gate. Its invention is ascribed to the French Huguenots in 1579, who, with them, took Cahors in the same year.

Petards are of four different sizes: the first contains 12lbs. 13oz. second 10lbs. 11oz. third 1lb. 10oz. fourth 1lb. The blind fuze composition for them is of mealed powder, 7lb. wood ashes 3oz.

Stores for one Petard.

Hooks to hang the petard .	2
Gimblets . . .	2
Brass fuze . . .	1
Wrench to screw the fuze .	1
Blue paper portfires .	6
Slow match yards .	4
Props or forks . .	2
Copper funnels . .	1
Tallow ounces . .	8
Cartridges . . .	1

PETARDER, *Fr.* to fire petards.

PETARDIER. The man who loads, fixes, and fires the petard. It likewise signifies among the French, the man who makes or throws a petard.

PETEL, *Ind.* The head of a village.

PETER, *Fr.* in a military sense, to explode, to make a loud noise.

PETEROLLES, *Fr.* Squibs, such as children make and use in the streets for their diversion.

PETITE-*Guerre*, Fr. See GUERRE, for its definition.

PETITE-*Guerre*, is carried on by a light party, commanded by an expert partisan, and which should be from 1000 to 2000 men, separated from the army, to secure the camp or cover a march; to reconnoitre the enemy or the country; to seize their posts, convoys, and escorts; to plant ambuscades, and to put in practice every stratagem for surprising or disturbing the enemy; which is called carrying on the *Petite-guerre*. The genius of these days, and the operations of the American war, have placed the service of such a corps in a most respectable light, as it is more fatiguing, more dangerous, and more desultory than any other.

To form a corps capable of carrying on the *Petite-guerre* to advantage, prudence requires that it should consist of 1000 men at least, without which a partisan cannot expect to support the fatigues of a campaign, and seize the most important occasions that every where offer, and which a too great inferiority must make him forego.

It is no less important that this corps should be composed of light infantry and cavalry; and as it is most incontestible that the cavalry should be the most active in carrying on the *Petite-guerre*, it were to be wished that they were likewise the strongest, so as to have 600 cavalry and 400 infantry in a corps of 1000 men, making four companies of light infantry, and twelve troops of cavalry. Each company of infantry to consist of 1 captain, 1 first and 2 second lieutenants, 6 serjeants, and 100 men, including 6 corporals, 4 lance-corporals, and 2 drummers. Each troop of cavalry to consist of 1 captain, 1 first and 1 second lieutenant, 1 ensign, a quarter-master, 6 serjeants, and 100 horsemen; including 6 corporals, a trumpeter and 2 farriers.

The commanding officer should have the naming of the officers of this corps, or at least the liberty to reject such as he is convinced are not qualified for such service. To support the honor of this corps upon a solid and respectable footing, the strictest subordination must extend from the chief to all the officers, and the most rigid discipline, vigilance, patience, bravery, and love of glory, ought to pervade the whole corps.

PETITION. See MEMORIAL.

PETRE. See NITRE, SALTPETRE.

PETRINAL, *or Poitrinal*, Fr. a species of firearms between the arquebus and the pistol, which was used among the French, during the reign of Francis I. There is mention made of it in an account of the seige of Rouen, which was undertaken by Henry IV. in 1592. Being shorter than the musquet but of a heavier calibre, and not unlike our blunderbuss; it was slung in a cross belt, so as to rest upon the chest of the person who discharged it. From this circumstance it obtained the name of *Poitrinal*.

PETRONEL. See PISTOL.

PETTAH, *Ind.* the suburbs, or a town adjoining to a fort, which is in general surrounded by a stockade or fence of bamboos, a wall, and a ditch.

PEUPLER, *Fr.* literally means to people. This expression is used, in a military sense, by Belaire, author of *Elémens de Fortification*, in the following manner:—Il faut *peupler* la surface d'un glacis *de Pierriers*. The surface of a glacis ought to be well covered with pedereros. See page 388.

PHALANGE, *Fr.* See PHALANX.

PHALANX, a word taken from the Greek, signifying the same as legion. In antiquity, a huge, square, compact battalion, formed of infantry, set close with their shields joined, and pikes turned across. It consisted of 8000 men, and Livy says, it was invented by the Macedonians; and hence called the Macedonian phalanx.

PHAROS, (*Phare*, Fr.) a light-house or pile raised near a port, where a fire is kept burning in the night to direct vessels near at hand. The Pharos of Alexandria, built at the mouth of the Nile, was anciently very famous; whence the name was derived to all the rest. Ozanam says, Pharos anciently denoted a streight, as the Pharos or Pharo of Messina.

PHARSALIA, so called from Pharsalus, anciently a town in Thessaly, now Turkey in Europe, which lies a little to the south of Larissa. This spot was rendered memorable in history by the battle that was fought between Pompey and Cæsar, when they contended for the empire of the world. Plutarch has given the following account of the engagement:—

"Both armies were now arrived at the fields of Pharsalia, conducted by the two greatest generals alive; Pompey at the head of all the Roman nobility, the flower of Italy and Asia, all armed in the cause of liberty. Cæsar at the head of a body of troops firmly attached to his interests, men who had faced every appearance of danger, were long inured to hardships, and had grown from youth to age in the practice of arms. Both camps lay in sight of each other. In this manner they spent the night; when next morning, Cæsar's army was going to decamp, word was brought him, that a tumult and murmur were heard in Pompey's camp, as of men preparing for battle. Another messenger came soon after with tidings that the first ranks were already drawn out. Cæsar now seemed to enjoy the object of his wishes. *Now*, cried he to his soldiers, *the wished-for day is come, when you shall fight with men, not with want and hunger.* His soldiers, with joy in their looks went each to his rank, like dancers on a stage; while Cæsar himself at the head of his tenth legion, a body of men that had never yet been broken, with silence and intrepidity waited for the onset. While Cæsar was thus employed, Pompey on horseback viewed both armies; and seeing the steady order of the enemy, with the impatience of his own soldiers, he gave strict orders, that the vanguard should make a stand, and keeping close in their ranks receive the enemy. Pompey's army consisted of 45,000 men, Cæsar's not quite half that number. And now the trumpet sounded the signal for battle on both sides, and both armies approached each other.

"While but yet a little space remained between either army, Caius Crastinus, a devoted Roman, issued from Cæsar's army at the head of 120 men, and began the engagement. They cut through the opposite ranks with their swords, and made a great slaughter; but Crastinus still pressing forward, a soldier run him through the mouth, and the weapon came out at the back of his neck. In the mean time Pompey, designed to surround Cæsar, and to force his horse, which amounted to only one thousand, to fall back upon his infantry, gave orders that his own cavalry, consisting of 7000 men, should extend itself, and then attack the enemy. Cæsar expecting this, had placed 3000 foot in reserve, who rushed out fiercely, and attacked Pompey's horse, letting fly their javelins in the faces of the young delicate Romans, who, careful of their beauty, turned their backs and were shamefully put to flight. Cæsar's men, without pursuing them flanked the enemy, now unprotected by their horse, and soon a total rout began to ensue. Pompey, by the dust he saw flying in the air, quickly conjectured that his cavalry was overthrown, and overpowered by the event retired to his camp in agony and silence. In this condition he sat pondering in his tent, till roused by the shouts of the enemy breaking into his camp, he cried out: *What, into the very camp!* and without uttering any thing more, but putting on a mean habit, to disguise his flight, he departed secretly." During the seven years war Frederick the great, king of Prussia, was much in the same situation. He had retired to his tent, and had given up every thing for lost, when the daring enterprise of Ziethen, who commanded the Death Hussars, turned the fortune of the day; and though he lost an incalculable number of Prussians, he secured the victory, and thereby restored to his master both his kingdom and his crown.

PHATUK, *Ind.* a gaol or prison. It likewise means a gate.

PHAUGUN, *Ind.* a month, which in some degree agrees with February and March.

PHILEBEG, *or Kilt*, from the Gaelic, *Filleadh beg*, which signifies a little plaid. This part of the Highland dress corresponds with the lower part of a belted plaid, and is frequently worn as an undress by Highland officers and soldiers. The philebeg or kilt may be considered as a very good substitute for the belted plaid, as it is not, at present, thought necessary for the Highlander to carry his clothing for the night, as well as by day, about his person. This was the case in ancient times, when the *breacbean* answered both purposes. The philebeg is a modern invention, and is the garment which some, who have endeavored to establish the antiquity of *Truis*, confound with the *breacbcan filleadh*.

PHIRMAUND, *Ind.* This word is sometimes written *Firmaun*, and signifies a royal commission, mandate, charter, proclamation, or decree.

PHOUSDAR, *Ind.* The same as *Fousdar*, the superintendant of a large district. It more immediately signifies the officer in charge of the revenue.

PHOUS-DAN, *Ind.* The commander of a large body of forces.

PIAN, *Fr.* a term used in the West Indies, to signify a venereal taint.

PIANISTE, *Fr.* a person infected with the venereal disorder.

A PIC, *Fr.* perpendicularly.

PICE, *Ind.* a copper coin, used in most parts of India, the value of which four pices make an anna, sixteen anna, a rupee; and a rupee is half of our dollar; so that there are 64 pices to a rupee or half a dollar.

PICAROON, a pillager, one who plunders; a smuggler, one who violates the laws.

PICKETS, in *fortification*, stakes sharp at one end, and sometimes shod with iron, used in laying out the ground, of about three feet long; but, when used for pinning the fascines of a battery, they are from 3 to 5 feet long.

Pickets, in *artillery*, are about 5 or 6 feet long, shod with iron, to pin the park lines, and to lay out the boundaries of the park.

Pickets, in the *camp*, are also stakes of about 6 or 8 inches long, to fasten the tent cords, in pitching the tents; also, of about 4 or 5 feet long, driven into the ground near the tents of the horsemen, to tie their horses to.

Picket, an out-guard posted before an army, to give notice of an enemy approaching. See Guard.

Picket, a barbarian kind of punishment so called, where a soldier stood with one foot upon a sharp pointed stake: the time of his standing was limited according to the offence.

PICK, } A sharp pointed iron
PICK-AXE, } tool, used in trenching,
PICKER, } &c. to loosen the ground.

Picker likewise means a small pointed piece of brass or iron wire, which every soldier carries to clear the touch-hole of his musquet. The brass pickers are the best, because they are not liable to snap or break off.

PICOREE, *Fr.* an obsolete French term, signifying a party of soldiers who go out in search of plunder.

PICORER, *Fr.* to go out in search of plunder. Obsolete.

PICOREUR, *Fr.* a marauder.

PICQUEERING, PICKERING, PICKEROONING, a little flying skirmish, which mauraders make, when detached for pillage, or before a main battle begins.

PICS-*Hoyaux*, Fr. Different sorts of pick-axes used by the pioneers.

PIECE, (*Pièce*, Fr.) This word is variously used, in a military sense, by the French and English, viz.

Un homme armé de toutes PIECES, *Fr.* a man armed at all points, or cap-a-pied.

Pieces *d'honneur*, Fr. the insignia or marks of honor. These consist of the crown, sceptre, and sword.

PIECES *of Ordnance* are all sorts of great guns and mortars.

Battering Pieces are the large guns which serve at seiges to make breaches, such as the 24-pounder, and the culverin, which carries 18lb. ball.

Garrison-Pieces, are mostly heavy 12, 18, 24, 36, and 42-pounders, besides wall guns.

Field-Pieces are twelve pounders, demi-culverins, six pounders, sakers, minions, and three pounders, which move with an army, and are parked behind the second line when it encamps, but are advanced in front, in the intervals of battalions, &c. and on the flanks in the day of battle.

Regimental Pieces, are light 6 pounders: each regiment has generally two of these pieces. See *Am. Mil. Lib.*

PIECE is likewise used to express a soldier's musquet.

Piece *Goods*, in India, the various fabrics which manufacture cotton and silk, are distinguished by this term.

Une Piece *d'artillerie, une* Piece *de canon*, Fr. These terms are used by the French to signify cannon in general.

Pieces *de Battierie*, Fr. See Battering Pieces.

Pieces *de campagne*, Fr. See Field Pieces.

Pieces *de vingt-quatre*, Fr. 24 pounders.

Pieces *de trente-six*, Fr. 36 pounders. When pieces are not specifically named the term is used in the same general sense by the English, as, one hundred pieces of cannon, or artillery: *cent pièces d'artillerie*; but when the calibre is mentioned, it is usual in English to substitute the word pounder for piece, as *une pièce de vingt quatre*; four and twenty pounder.

Démonter les Pieces, *Fr.* to dismount cannon.

Enclouer les Pieces, *Fr.* to spike cannon.

Rafraichir les Pieces, *Fr.* to spunge or clean out cannon.

Piece *de canon brisé*, Fr. The French formerly made use of cannon that could be taken to pieces, and so rendered more portable. This species of ordnance was distinguished as above.

Piece *versée en panier ou en cage*, Fr. a piece of ordnance is said to be in this situation, when it is so completely overturned, as to have the wheels of its carriage in the air. Various methods have been proposed by able engineers to raise cannon that have been overturned. See *Saint Remi*, *Manuel de l'artilleur*, and a late publication, intituled, *Aide Mémoire a l'usage des Officiers d'Artillerie de France*, by Gassendi.

Pieces *légeres*, Fr. light pieces. See Field Pieces.

Pieces *à la Suédoise*, Fr. field pieces originally invented, and since used among the Swedes.

Pieces *Nettes*, Fr. Artillery pieces that have no defect whatever.

Pieces *de Chasse*, Fr. a marine term, signifying the cannon that is placed on the stem and forecastle of a ship. We call them chase-guns.

Pieces *détachées*, *Travaux avancés en dehors*, Fr. Those works which cover the body of a fortified place, towards the country; of this description are ravelins, demi-lunes, hornworks, tenailles, crownworks, queues d'hironde, enveloppes, &c.

To be cut to Pieces, (*Etre écharpé*, Fr.) The French say, *Un tel régiment, a été écharpé*. Such a regiment was cut to pieces.

PIED *de Roi*, Fr. a measure containing twelve French inches, or one hundred and forty lines.

Pied *Quarré*, Fr. The French square foot contains the same dimensions in length and breadth, giving one hundred and forty inches of surface.

Pied *de toise quarrée*, Fr. the sixth part of a square toise. The square toise contains 36 feet, the square foot consequently comprehends six feet, and must be considered as a rectangle.

Pied *Cube*, Fr. the same measure according to three dimensions. It contains 1728 cubic inches.

Pied *Rhenan* or *Rhinlandique*, Fr. the German foot. See Measure.

Pied *courant*, Fr. the extent of a foot considered as to length only.

Pied *Marin*, Fr. literally, sea-leg. See Marin.

Pied *de mur ou de muraille*, Fr. that lower part of a wall which is otherwise called *Escarpe*, and is contained between its base and top.

Pied *de rampart*, Fr. that extent of ground which lies between the fosse and the houses in a fortified town or place.

A Pied, *Fr.* On foot.

Pied *à pied*, Fr. foot by foot, gradually. *Faire un logement pied à pied*; to establish a lodgement foot by foot. *Forcer les ouvrages pied à pied*; to make regular approaches, or to besiege a town by opening trenches, &c. instead of insulting it by a direct attack.

Troupes retenues sur pied, *Fr.* troops kept upon full pay.

Etre en pied, *Fr.* to be kept upon full pay, in contradistinction to *reformé*, or being reduced.

PIEDROIT, *Fr.* Pier.

PIEGE, *Fr.* Snare.

PIERRE, *Fr.* A stone.

Pierre *à feu*, Fr. Flint.

Pierre *à fusil*, Fr. A flint.

PIERREE, *Fr.* A drain, water-course.

PIERRIER, *Fr.* A swivel, a pederero.

PIERRIERE, *Fr.* A quarry.

PIERRIERES, *Fr.* Heaps of stones, which are designedly collected round fortified places to interrupt besiegers in their approaches. These heaps are covered over with earth to conceal the stratagem;

and the spots on which they lie are frequently fortified with palisadoes, in the form of bonnets or saliant angles; so that when the besieger attempts to carry them, the artillery from the ramparts or neighboring places, may be fired amongst the heaps of stones, and considerable damage be done by the fragments that must necessarily fly about.

PIERS. The columns on which the arch of a bridge is raised.

PIES, *Fr.* Knights that were created by Pope Pius IV. in 1560, with the titles of counts Palatines. They took precedence, at Rome, of the knights of the Teutonic order, and of those of Malta.

PIETINER, *Fr.* to move the feet with great quickness. It likewise signifies to *mark time*, but not technically so.

PIETON, *Fr.* a foot soldier.

PIEU, *Fr.* a large beam, or stake.

PIEUX, *Fr.* This word is sometimes used in the plural number to signify palisades.

PIGNON, *Fr.* the gable end of a building.

PIKE, in *war*, an offensive weapon, consisting of a wooden shaft, from 6 to 20 feet long, with a flat steel head, pointed, called the spear. This instrument was long in use among the infantry; but now the bayonet, which is fixed on the muzzle of the firelock, is substituted in its stead. The Macedonian phalanx was a battalion of pikemen.

PIKEMEN, soldiers armed with pikes. The utility of the Pike was pointed out by marshal Saxe, but until the French being destitute of firearms for their national guards, were forced to resort to it, the great value of the weapon was not well understood; although the bayonet, which is only a pike on the end of a firelock, was in general use. On an emergency, where arms are scarce, the pike may always be relied on against infantry or cavalry. See *Am. Mil. Lib.*

PIKESTAFF, the wooden pole or handle of a pike.

PILE, *Fr.* A species of javelin which was used by the Romans. They darted these weapons with so much force, that, according to tradition, two men have been pierced through, together with their shields or bucklers.

PILES, strong pieces of wood, driven into the ground to make a firm foundation for any kind of work.

To PILE or *stack arms*, to place three musquets with six bayonets in such a relative position, that the butts shall remain firm upon the ground, and the muzzles be close together in an oblique direction. This method has been adopted to prevent the injury which was formerly done to musquetry, when the practice of grounding the firelock prevailed. Every recruit should be taught how to pile or stack arms before he is dismissed the drill.

PILE, any heap; as a pile of balls, shells, &c.

PILES *of shot or shells*, are generally piled up in the magazines, in three different manners: the base is either a triangular square, or a rectangle; and from thence the piles are called triangular, square, and oblong.

TABLE, *of Triangular Piles of Shot.*

Side.	Content.	Side.	Content.	Side.	Content.	Side.	Content.
2	4	13	473	24	437	35	7486
3	10	14	574	25	751	36	8184
4	20	15	696	26	3091	37	9322
5	35	16	731	27	3458	38	10131
6	56	17	883	28	3853	39	10981
7	84	18	1043	29	4277	40	11871
8	120	19	1222	30	4731	41	12807
9	165	20	1540	31	5216	42	13730
10	220	21	1641	32	5733	43	14659
11	296	22	1883	33	6283	44	15585
12	384	23	2148	34	6867	45	16511

Explanation. The numbers in the 1st, 3d, 5th, and 7th vertical columns, express the number of shot in the base or side of each triangular pile; and the numbers in the 2d, 4th, 6th, and 8th vertical columns, express the number of shot in each pile.

Rules for finding the number in any PILE.

Triangular PILE.

Multiply the base by the base + 1, this product by the base + 2, and divide by 6.

Square PILE.

Multiply the bottom row by the bottom row + 1, and this product by twice the bottow row + 2, and divide by 6.

Rectangular PILES.

Multiply the breadth of the base by itself + 1, and this product by three times the difference between the length and the breadth of the base, added to twice the breadth + 1, and divide by 6.

Incomplete PILES.

Incomplete piles being only frustums, wanting a similar small pile on the top, compute first the whole pile as if complete, and also the small pile wanting at top; and then subtract the one number from the other.

Table, *of square Piles of Shot.*

side	content	side	content	side	cont't	side	cont't	side	cont't
2	5	20	2871	38	19019	56	60116	74	137825
3	14	21	3311	39	20540	57	63365	75	143450
4	30	22	3795	40	22140	58	66729	76	149226
5	55	23	4324	41	23821	59	70210	77	155155
6	91	24	4900	42	25585	60	73810	78	161239
7	140	25	5525	43	27434	61	77531	79	167480
8	204	26	6201	44	29370	62	81375	80	173880
9	285	27	6930	45	31395	63	85344	81	180441
10	385	28	7714	46	33511	64	89440	82	187165
11	506	29	8555	47	35720	65	93665	83	194054
12	650	30	9455	48	30824	66	98021	84	201110
13	819	31	10416	49	40425	67	102510	85	208335
14	1015	32	11140	50	42925	68	107134	86	215731
15	1240	33	12529	51	45526	69	111895	87	223300
16	1496	34	13685	52	48230	70	116795	88	231044
17	1785	35	14910	53	51039	71	121836	89	238965
18	2109	36	16206	54	53953	72	127022	90	247065
19	2470	37	17575	55	56980	73	132349	91	255346

Explanation. The numbers gradually increasing, from 2 to 91, express the number of shot at the base of each square pile; and the numbers opposite, the quantity of shot in each complete square pile. *Example.* No. 20 gives 2871, and No. 30 gives 9455; and so of the rest.

PILIER, *Fr.* a buttress.

PILLAGE, (*pillage*, Fr.) The act of plundering.

To pillage, to spoil, to waste, to plunder.

Pillager, a plunderer; one who gets a thing by violent or illegal means.

PILLAR, in a figurative sense, support. A well disciplined army may be called the pillar of the state; an ill disciplined one, the reverse.

PILLARS, *and* ARCHES. It was customary among the ancients, particularly among the Romans, to erect public buildings, such as arches and pillars, for the reward and encouragement of noble enterprise. These marks were conferred upon such eminent persons as had either won a victory of extraordinary consequence abroad, or had rescued the commonwealth from any considerable danger. The greatest actions of the heroes they stood to honor, were curiously expressed, or the whole procession of a triumph cut out on the sides. The arches built by Romulus were only of brick, those of Camillus of plain square stones; but those of Cæsar, Drusus, Titus, Trajan, Gordian, &c. were all entirely marble. As to their figure, they were at first semicircular; whence probably they took their names. Afterwards they were built four square, with a spacious arched gate in the middle, and little ones on each side. Upon the vaulted part of the middle gate, hung little winged images, representing victory, with crowns in their hands, which when they were let down, they put upon the conqueror's head as he passed under the triumph.—Fabricii Roma, cap. 15.

The columns or pillars were converted to the same design as the arches, for the honorable memorial of some noble victory or exploit, after they had been a long time in use for the chief ornaments of the sepulchres of great men, as may be gathered from Homer, Iliad 16.

The pillars of the emperors Trajan and Antoninus, have been extremely admired for their beauty and curious work. We find them thus particular described in page 53, of Kennett's Roman Antiquities.

The former was set up in the middle of Trajan's forum, being composed of 24 great stones of marble, but so curiously cemented, as to seem one entire natural stone. The height was 144 feet, according to Eutropius, (Hist. lib. 8.) though Martian (lib. iii. cap. 13.) seems to make them but 128. It is ascended by 185 winding stairs, and has 40 little windows for the admission of light. The whole pillar is incrusted with marble, in which are expressed all the noble actions of the emperor, and particularly the Dacian war. One may see all over it the several figures of forts, bulwarks, bridges, ships, &c. and all manner of arms, as shields, helmets, targets, swords, spears, daggers; belts, &c. together with the several offices and employments of the soldiers; some digging trenches, some measuring out a place for the tents, and others making a triumphal procession. (Fabricus, cap. 7.) But the noblest ornament of this pillar, was the statute of Trajan on the top, of a gigantic bigness, being no less than 20 feet high. He was represented in a coat of armor proper to the general, holding in his left hand a sceptre, in his right a hollow globe of gold, in which his own ashes were deposited after his death, (Casalius, par. I. c. 2.)

The column or pillar of Antoninus, was raised in imitation of this, which it exceeded only in one respect, that it was 176 feet high; (Martian, lib. vi. cap. 13.) for the work was much inferior to the former, as being undertaken in the declining age of the empire. The ascent on the inside was 106 stairs, and the windows in the inside 56. The sculpture and the other ornaments were of the same nature as those of the first; and on the top stood a colossus of the emperor naked, as appears from some of his coins. See Martian idem.

Both these columns are still standing at Rome, the former most entire. But Pope Sixtus I. instead of the two statutes of the emperors, set up St. Peter's on the column of Trajan, and St. Paul's on that of Antoninus. Casal. part I. c. 11.

Among the columns and pillars we must not pass by, (to use Mr. Kennett's words) the *Milliarium aureum*, a gilded pillar in the forum, erected by Augustus Cæsar, at which all the highways of Italy met, and were concluded. (Martian, lib. iii. cap. 18.) From this they counted their miles, at the end of every mile setting up a stone; whence came the phrase *Primus ab urbe lapis*, and the like. This pillar, as Mr. Lassels informs us, is still to be seen.

PILON, *Fr.* a weapon, the use of which has been recommended by marshal Saxe, in his plan forming several battalions four deep. The two first ranks are to be armed with musquets, the third and fourth with large half pikes or pilons, having their musquets slung across their shoulders.

PILUM. The head of an arrow was so called by the Romans.

PINASSE, *Fr.* a pinnace.

PINDAREES, *Ind.* plunderers and marauders, who accompany a Mahrattah army. The name is properly that of persons who travel with grain and merchandize; but war affording so many opportunities and creating so many necessities, the merchants as it is all over the world, became plunderers and the worst of enemies.

To **PINION**, to bind the hands or arms of a person so as to prevent his having the free use of them.

PINK, a sort of small ship, masted and ribbed like other ships, except that she is built with a round stern, the bends and ribs compassing, so that her sides bulge out very much.

PIN, an iron nail or bolt, with a round head, and generally with a hole at the end to receive a key: there are many sorts, as axle-tree pins, or bolts, bolster pins, pole-pins, swing-tree pins, &c.

There are likewise *musquet pins*, which are small pieces of iron or wire that fasten the stock. Soldiers are very apt to take out these pins in order to make their pieces ring; but they should not on any account, be permitted so to do.

PINTLE in *artillery*, a long iron bolt, fixed upon the middle of the limber-bolster, to go through the hole made in the trail-transom of a field-carriage, when it is to be transported from one place to another.

Pintle-*plate*, is a flat iron, through which the pintle passes, and nailed to both sides of the bolster, with 8 diamond headed nails.

Pintle-*washer*, an iron ring through which the pintle passes, placed close to the bolster for the trail to move upon.

Pintle-*hole*, is of an oval figure, made in the trail-transom of a field-carriage, wider above than below, to leave room for the pintle to play in.

PIOBRACH, the Gaelic word for a *piper;* also an air played upon the bagpipe. It is now more strictly applied to the ancient Highland martial music.

Piobrachs, are either simple or compound; some of them consist of a march, &c. and are beautifully varied, and highly characteristic.

PIOCHE, *Fr.* a mattock, pickaxe.

PIOCHER, *Fr.* to dig.

PIONEERS, in *war-time*, are such as are commanded in from the country, to march with an army, for mending the ways, for working on entrenchments and fortifications, and for making mines and approaches: the soldiers are likewise employed in all these things.

Most of the European artillery corps have a company of pioneers, well instructed in that important branch of duty. The regiments of infantry and cavalry have 3 or 4 pioneers each, provided with aprons, hatchets, saws, spades, and pick-axes. The French *sappers* are the same kind of soldiers.

PIONIERS, *Fr.* pioneers.

PIPE, a tube; a musical instrument; a liquid measure, containing two hogsheads.

PIPE, from the Gaelic *piob mohr*, which signifies great pipe. The Highland bagpipe is so called, and is an instrument well calculated for the field of battle. When the bagpipe is skilfully performed, its martial music has a wonderful effect upon the native Scotch, particularly the Highlanders, who are naturally warlike.

TAIL-*Pipe*, a small brass pipe fixed at the swell of the British musquet, which receives the ramrod.

Trumpet PIPE, a small brass pipe near the muzzle of the British firelock, through which the ramrod is let down It is called trumpet-pipe, from its resemblance to the mouth of a trumpet. The Prussians have no pipes to their musquets; the ramrod being received into a cylinder which runs parallel with the barrel; nor is there any pipe of this kind to the American or the French musquet; the ramrod passing within the three straps of iron or plate rings which bind the barrel to the stock.

PIPE-*Clay* and *Whiting*, a composition which soldiers use for the purpose of keeping their cross-belts, &c. clean.

PIQUE, *Fr.* See PIKE.

PIQUICHINS, *Fr.* irregular and ill-armed soldiers, of which mention is made in the history of the reign of Philippe Augustus. They were attached to the infantry.

PIQUIER, *Fr.* a pikeman, or one who is armed with a pike.

PIRAMIDE, *Fr.* See PYRAMID.

PIRAMIDES *de feu*, Fr. See JETS DE FEU.

PIRATE, *Fr.* a pirate.

PISTE, *Fr.* the track or tread a horseman makes upon the ground he goes over.

PISTOL, a species of small fire-arms, of which there are various sorts and sizes, viz.

Highland PISTOL. The old Highland pistol appears singular enough in the present day. Some that have been preserved, exhibit marks of excellent workmanship. The stock is metal, and the but end so sharped, that when fired off, the pistol can be used as a very serious weapon at close quarters. The Highland pistol, though never used by any of the British regiments, is still worn by every person who wishes to be considered as fully dressed and accoutred in the ancient garb. It is suspended from the left side of the waistbelt.

Horse-PISTOL, so called from being used on horseback, and of a large size.

Management of the PISTOL *on horseback for military purposes.* Every recruit when he joins the horse-drill should be made perfectly acquainted with the handling of his pistols according to rule, and of firing correctly at a mark. To this end he must be taught to draw, load, fire, and return his pistol, by word of command, viz.

1st. The right glove is to be taken off, and the goat-skin thrown back.

Draw right PISTOL. This is done at two motions; 1st, the man must seize the handle of the pistol with his right hand, the back towards the body. 2d, *Draw* it out of the holster with a brisk motion, dropping the butt of the pistol on the right holster, and keeping the muzzle upwards.

Load PISTOL. The pistol is to be dropped smartly into the left hand; open the pan, prime, cast about, and load; as soon as loaded, seize the pistol by the butt, and come to the same position as in the second motion in drawing; the bridle hand must be kept as steady as possible. In loading the pistol, the barrel is to be kept to the front.

Return PISTOL. This is done in two motions: 1st, turn the muzzle into the holster, with the back of the hand towards the body, and press home the pistol. 2d, Quit the right hand briskly.

Cock PISTOL. Drop the pistol into the left hand, cocking with the thumb of the right, and as soon as done come to the second position, viz. muzzle upwards.

To the right aim. Come smartly to an aim, looking well along the barrel to the object you are aiming at, and turning your body as much as is necessary to aim well, but taking care not to displace your bridle hand.

Fire! pull briskly at the word, and as soon as fired go on with the loading motions; when loaded come to the position as in the first direction, viz. *muzzle upwards.*

Cock Pistol, as already explained.

To the left aim. This requires particular attention, as the men will be apt to bring their right shoulders too forward, and by that means displace their bodies and the bridle hand.

Fire! as already explained.

Cock PISTOL. *To the front aim.* You must raise yourself in your stirrups, in order to take a proper aim; you must then look well along the pistol, and wait for the word *fire*.

Fire! As soon as you have fired, you must drop into your seat, and go on with the loading motions, as before directed.

Return Pistol, as already explained.

Draw left PISTOL. See *Draw* [illegible] *right Pistol.*

Pocket Pistol, a small pistol, which may be conveniently carried in the pocket.

PISTOLETS, *Fr.* See Pistols.

PITANS, Patan, *Ind.* according to Mr. Orme, in his History of the Carnatic, the Pitans are supposed to be the descendants of the northern Indians, who were early converted to Mahomedanism. They have been reckoned the best troops. They are habitually fierce.

Pitan *Nabobs.* Certain chiefs in India so called, viz. of Cudapa, Canoul, and Savanore.

PITAUX, *Fr.* This word is sometimes written petaux, and was formerly used to distinguish those peasants that were pressed into the service, from soldiers who were regularly inlisted.

To **PITCH**, (*asseoir*, Fr.)

To pitch *a camp*, (*asseoir un camp*, Fr.) to take a position, and to encamp troops upon it according to the principles of castrametation. See *Am. Mil. Lib.*

To pitch *a tent*, to place a certain regulated quantity of canvas upon poles, so as to afford a temporary cover, against the inclemencies of the weather for one or more, officers or private soldiers. In order that the men may become expert in pitching and striking tents, they ought so be practised whilst in camp to do either.

PITCHANDAH, *Ind.* a fortified pagoda on the north bank of the Coleroon, one mile east of Seringham.

PITONS, *Fr.* nails with round eyes. They likewise signify pins with iron rings.

Pitons *d'affut*, Fr. iron pins which are used to keep the plate-bands of the carriage of a cannon tight and compact.

PIVOT, (*Pivot*, Fr.) in a military sense, that officer, serjeant, corporal, or soldier, upon whom the different wheelings are made in military evolutions. There are two sorts of *pivots* distinguished according to the position of the troops who are governed by them, viz. *standing* pivot and *moveable* pivot. When a battalion, for instance, stands in open column of companies, the *right in front*, the last man upon the left of the front rank of each company, is called the *inner*, or *standing pivot*; and the first man upon the right ditto, is called the *outer pivot*, or *wheeling flank*. So much depends upon the accurate position of the different pivots, that no movement can be thoroughly correct unless the most scrupulous attention be paid to them. Officers, in particular, ought to recollect that when they are posted upon the flanks, they become essentially necessary to the preservation of that perpendicular and parallelism of a march, without which direction the best digested manœuvres must be ultimately rendered useless. They must constantly bear in mind, that it belongs to the mounted field officers to watch the aggregate, and that they themselves, being incorporated parts of the different divisions, are to move suc sively forward, with no other object view than the perpendicular point be them. For if they once turn to the ri or left, or become anxious about the mo ments of others, instead of being means of insensibly correcting any er that might casually occur, they will viate themselves, and at every step crease the irregularity. On this accou the instant an officer has wheeled his vision, he must resume his perpendicu position, look stedfastly on his lead pivot, preserve his relative distan and keep his person perfectly squ He ought likewise to be particularly c rect in stepping off when the whee completed.

Moveable Pivot, one which du the wheel of its division advances i circular direction, instead of turning the spot where it originally stood. T when divisions, &c. are successiv wheeled, without being first halted, pivot upon which they wheel is said t *moveable.*

In the drill, single ranks are frequen wheeled on a moveable pivot. In wh case, both flanks are moveable, and scribe concentring circles round a po which is a few paces from what wo otherwise be the standing flank; and e are all turned towards the outer pivot flank man, whether he is on the outw flank, or on the flank wheeled to.

Pivot-*Flanks*, the flanks upon wh a line is formed from column. W the right of the battalion is in front, pivot flanks are on the left of its seve companies, platoons, &c. and *vice ve* when the left is in front.

Pivot-*flank officer*, the officer wh on the first flank. In all wheelings ring the march in column the officer that flank upon which the wheel is m must attend himself to the correctness the pivot.

Platoon Pivots, the men upon wh a battalion marches in column of platoo is wheeled up into line, or into colun when the line has been formed accord to a given front.

It is in the modern improved tact determined that commissioned offic shall not themselves be the *pivots*, that they shall consist of the non-co missioned officers, or rank and file each flank only; and not the offic on those flanks; but the officers strictly required to see that the *pi* perform their duty correctly, and are sponsible for it.

PLACAGE, *Fr.* in fortification kind of revetement, which is made thick plastic earth, laid along the talus such parapets as have no mason-wo and which is covered with turf.

PLACARD, } or, as it is in the origi
PLACART, } Dutch language *P caat*, a term used abroad for a procla tion, edict, &c. put up in all pul

by government authority ; where-
ir subjects are ordered to do, or for-
something expressed therein. See
FESTO.

ACARD, *Fr.* any bill, or public
that is posted up ; same as *Bul-*
It likewise means a libel.

CARDER, *Fr.* to post up, to li-

ACE, *emplacement*, Fr. any spot or
which suits the plans of an architect
ld upon.

CE, in *fortification*, signifies, in
l terms, a fortified town, a fortress :
we say it is a strong place. See
Encyclopædia, vol. V. PLACE.

CE *of arms*, (*Place d'armes*, Fr.)
term has various significations,
igh it uniformly means a place which
ulated for the rendezvous of men
1s, &c.

When an army takes the field,
strong hold or fortress which sup-
its operations by affording a safe
t to its depots, heavy artillery, ma-
es, hospitals, &c. is called a *place*
rs.

y. In offensive fortification, those
are called *places of arms*, or *paral-*
which unite the different means of
, secure the regular approaches,
d contain bodies of troops who
do duty in the trenches, protect
workmen, or are destined to make
pression upon the enemy's out-
s.

ere are *demi-places of arms* between
laces of arms. These are more or
numerous in proportion to the resis-
made by the besieged.

ACES *of arms* belonging to the
rt-way. These are divided into two
, viz. *saliant* and *rentrant* places of
. There are likewise places of arms
osed of traverses, which are practised
ade in the dry ditches of military
s, in a perpendicular direction to the
of the half-moons and the tenail-

ACE *of arms in a town*, a place left
its centre, where generally the grand
d is placed. In towns regularly
fied, the place of arms should be in
entre. In this place the soldiers of
garrison parade, form, and mount
d, &c.

LACE *of arms of an attack*, *or of a*
b, are deep trenches 15 or 18 feet
, joining the several attacks together :
serve for a rendezvous and station
e guard of the trenches, to be at hand
pport the workmen when attacked.
customary to make 3 places of arms,
n the ground will permit : the first,
most distant from the place, is about
toises, or 600 yards, from the glacis
e covert-way ; the second is within
toises, or 280 yards ; and the third at
foot of the glacis. See PARAL-
S.

LACE *of arms of a camp*, was, strictly speaking, the bell-tents, at the head of each company, where the arms were formerly lodged ; likewise a place chosen at the head of the camp for the army to form in line of battle, for a review, or the like.

PLACE *of arms of the covert-way*, is a part of it, opposite to the re-entering angle of the counterscarp, projecting outwards in an angle.

PLACE *marécageuse*, Fr. a marshy place. A place of this description may be easily fortified, and at little expence ; nor does it require many troops for defence. Among other advantages, that of not being exposed to an enemy's mines, is by no means the least considerable. On the other hand, piles must be sunk in almost every direction : and should it be invested, it is almost impossible to succour it. Add to these inconveniences, the danger to which the garrison must be constantly exposed of being visited by some contagious disorder.

PLACE *elevée dans un plat pays*, Fr. Places that are put in a state of defence in a flat open country. These places are almost always secured by regular fortifications : the soil is good, and there is always plenty of earth adapted to every species of military work : there is abundance of water ; and should an enemy attempt to carry them by insulting the works, entrenchments may be easily thrown up to check him. Add to this, that it would require two or three armies, at least, to cut off the various supplies which can be procured from the country round. On the other hand, the goodness and abundance of the soil are equally beneficial to the besieging army. For the troops are thereby enabled to throw up entrenchments, to build redoubts, erect batteries, and by thus securing their approaches, to annoy the besieged at all hours, and in all ways.

PLACE *située sur le penchant d'une montagne*, Fr. a place situated or built upon the declivity of a hill. It is very difficult to fortify a spot of this sort. Whatever is erected upon it, must be commanded by the higher ground, and the body of the place be, of course, exposed to every attack.

PLACE *située dans une vallée*, Fr. a town, fortress, or hold that is built in a valley. Places so situated must be in constant jeopardy, as by getting possession of the heights, the enemy can always command them.

PLACE *située sur les bords d'une grand rivière*, Fr. a place, &c. built upon the banks, or borders of a large river. Places, constructed in a situation of this sort, are preferable to all others, provided they have a free and uninterrupted communication with the principal quarter from whence stores, provisions, and ammunition may be drawn. They may be regularly fortified towards the interior of the country, and it will require little or no artificial means to secure them on the side of the river.

Place *de guerre*, Fr. any town or place that is regularly, or irregularly fortified.

Place *basse*, Fr. In fortification the lower flanks according to certain systems are so called.

Place *forte*, Fr. a strong hold or place which presents at all points so many difficult obstacles against a besieging army, that it cannot be carried (except by surprize) unless the regular means of reducing it be resorted to.

Places *contreminées*, Fr. all fortresses, &c. are called *places contreminées*, or *countermined*, which, independent of their open and visible means of defence, &c. have subterraneous fortifications that are alongside the revetements of the works, under the glacis, or beneath the neighboring ground, to interrupt the approaches, and destroy the works of a besieging enemy.

Place *haute*, Fr. According to the systems of some engineers (which have not been followed of late years) the *place haute*, or high place, is that which stands the highest of three platforms that were constructed in the shape of an ampitheatre along the flanks of the bastions. Pagan, Blondel, and others, who have copied from these systems, did so from an idea, that considerable advantages might be derived from a powerful and concentrated discharge of artillery and musquetry. Not conceiving that it was possible to construct casemated flanks free of smoke, they built three or four open flanks one above the other. But they were soon rendered useless and untenable by the shells that fell, and the fragments that flew about in consequence of the demolition of the mason-work. Casemated ramparts, on the contrary, have been known to stand proof against the heaviest discharge of bombs, &c. to take up little room, and to afford ample space for a wide range of artillery, that is kept under cover.

Places *non revêtues*, Fr. all fortified towns or places are so called, when the ramparts that surround them are only lined with placage or simple turf. In this case the ramparts, so lined or covered, ought to be fraised and palisadoed above the berme or foot-path, to prevent surprizes. Hedges made of good quickset, well interwoven with other wood, and carefully attended to, will save the expence of palisadoes, which in marshy soils soon rot, and require to be replaced.

Places *revêtues*, Fr. All fortified towns or places are so called, whose ramparts are lined or covered with brick or stone. It frequently happens, that the revetement does not reach the terre-pleine of the rampart, especially when the parapets are thick and solid; in which case the revetement is more easily covered by the glacis. Parapets are no longer lined.

Place, *Fr.* This word is frequently used by the French, in a military sense, to signify ration, viz.

Une **place** *de bouche*, Fr. one ration of provisions.

Deux **places** *de fourrage*, Fr. Two rations of forrage.

To be **PLACED.** This expression is frequently used in naval and military matters, to signify the appointment or reduction of officers. Hence to be placed upon full or half-pay. It is more generally applicable to the latter case.

PLACER, *Fr.* to fix, to settle. This word is used among the French, as with us, to express the act of providing for a person by appointing him to a desirable situation, viz. *Placer un jeune homme dans un regiment;* to get a young man a commission in a regiment.

Un cheval bien **placé**, *Fr.* A horse is said, among the French, to be well placed, when his forehead runs perpendicularly down between the nostrils.

PLAFOND, *Fr.* The ceiling.

PLAFONNER, *Fr.* to ceil or adorn the upper part of a room, &c.

PLAGE, *Fr.* flat shore, or extent of coast, where there are no creeks, &c. for vessels to ride in.

PLAIE, *Fr.* a wound or scar.

PLAN, *ground plot*, or *ichnography*, in *fortification*, is the representation of the first or fundamental tract of a work, showing the length of its lines, the quantity of its angles, the breadth of the ditches, thickness of the rampart, parapets, and the distance of one part from another: so that a plan represents a work, such as it would appear if cut equal with the level of the horizon, or cut off at the foundation: but it marks neither the heights nor depths of the several parts of the works; that is properly *profile*, which expresses only the heights, breadths, and depths, without taking notice of the lengths. As architects, before they lay the foundation of their edifice make their design on paper, by which means they find out their faults, so an engineer, before tracing his works on the ground, should make *plans* of his designs upon paper, that he may do nothing without serious deliberation.

Exact plans are very useful for generals or governors, in either attacking or defending a place, in chusing a camp, determining attacks, conducting the approaches, or in examining the strength and weakness of a place; especially such plans as represent a place with the country about it, shewing the rivers, fountains, marshes, ditches, valleys, mountains, woods, houses, churches, defiles, roads, and other particulars, which appertain to it.

PLAN *of comparison*, a geometrical sketch of any fortress and adjacent country within cannon shot, in which the different levels of every principal point are expressed.

PLAN, *Fr.* See PLAN.

Lever le PLAN *de quelque place de guerre*, Fr. to draw the plan of a fortified town or place.

PLANCHETTE, *Fr.* a small board or copper-plate, which is used in practical geometry.

PLANCHES, *Fr.* Boards, planks.

PLANCHES *d'entrevoux*, Fr. Boards or planks that are laid between the joists or posts of a building.

PLANCHEYER, *Fr.* to board or floor.

PLANCONS, *Fr.* literally twigs, or small round pieces of wood. A term used in hydraulics. See *Belidor*.

PLANIMETRY, (*planimetrie*, Fr.) that part of geometry which considers lines and plane figures, without any reference to heights or depths, in opposition to stereometry, or the mensuration of solids.

PLANISPHERE, (*planisphere*, Fr.) a representation of the globe or sphere on paper, for geometrical and astronomical purposes.

To **PLANT**, in a military sense, to place, to fix; as to plant a standard. It likewise signifies to arrange different pieces of ordnance for the purpose of doing execution against an enemy or his works. Hence to plant a battery. Johnson applies it to the act of directing a cannon properly. The French use the word generally as we do, except in the last mentioned sense. They say, *mettre le canon en batterie*. In others the term bears the same signification, with occasional deviations when they apply it figuratively, viz.

PLANTER *le piquet chez quelqu'un*, Fr. To quarter one-self upon any body.

PLANTER *là quelqu'un*, Fr. To leave a person abruptly, or, as we familiarly say, to leave another in the lurch.

PLANTER *quelque chose au nez de quelqu'un*, Fr. To reproach a person with any thing, or, as we familiarly say, to throw it in his teeth. *Il lui planter sa poltronnerie au nez*; he reproached him openly for his cowardice, or he threw his cowardice in his teeth.

PLANTE, *Fr.* To be fixed, to be stationary. *Un soldat bien plante sur ses pieds*, Fr. A soldier that is well set up.

PLANTER *un bâtiment*, Fr. To lay the first stones, or the foundations of a building.

PLAQUE, *Fr.* The shell of a sword. See PLACAGE.

PLAQUES *de Plomb*, Fr. Sheets of lead. These are used for various purposes. In the artillery, to cover the vent of a cannon; and on board ships of war, to stop the holes, &c. that are made by cannon shot.

PLAQUER, *Fr.* to lay one plank over another. To cover any space with earth turf, &c.

PLASM. See MOULD.

PLASTER, a piece of greased leather or rag used by riflemen, &c. to make the ball fit the bore of the piece.

PLASTER, in building, a substance made of water and some absorbent matter, such as chalk or lime, well pulverised, with which walls are overlaid.

PLASTRON, a piece of leather stuffed, used by fencing-masters, to receive thereon the pushes made at them by their pupils.

PLASTRON, *Fr.* A breast plate or half cuirass. In the old French service the gens d'armes, the heavy cavalry, the light horse, &c. were obliged to wear breast-plates on all occasions at reviews, &c. The hussars were an exception to this order which took place on the 28th of May, 1733. In the original order, dated the 1st of February, 1703, it was particularly specified, that in order to be accustomed to their weight, the abovementioned corps should wear half cuirasses in time of peace. The captains of troops were obliged to keep the half cuirasses belonging to their men in constant repair.

PLAT, *ate*, Fr. Flat, level, low. The flat side of any thing; as, *Plat de Sabre*.

PLAT *pays*. A flat or low country. It is generally used among the French to signify that extent, or space of country, on which scattered houses and villages are built, in contradistinction to towns and fortified places. It is likewise used in opposition to a mountainous country. *Les soldats de la garnison vivoient aux dépens du plat pays*. The soldiers of the garrison lived upon the adjacent villages or country.

Punir à PLAT *de Sabre*. To punish a man by striking him with the flat side of a sabre blade. The French likewise say, *des coups de plat d'epée*. Blows given with the flat side of a sword. This mode of punishing is frequently adopted in foreign services, particularly among the Germans. M. de St. Germain, minister of the war department under Louis XVI. attempted to introduce it in France, but it was resisted by the army at large.

Battre à PLATE *couture*, Fr. To gain a complete and decided victory, or to beat an enemy so as to kill or take almost every man he had to oppose. Hence, *une armée battue à platte couture*, Fr. An army completely routed and undone.

PLAT *de l'équipage d'un vaisseau*, Fr. A dish or mess, consisting of seven rations or portions put together, and served out for the subsistence of seven men, on board French ships of war.

Etre mis au PLAT *des malades sur mer*, Fr. To be put upon the sick list on board a king's ship; or to receive such rations as were ordered to be served out to the sick.

PLATAIN, *Fr.* Flat coast. A spot

near the sea which is well calculated for a descent. As *Le Platain de d'Angoulin*, and the *Platain de Chatelaillon*, near Rochelle.

PLATES, or *prise plates*, in *artillery*, two plates of iron on the cheeks of a gun-carriage, from the cap-square to the centre, through which the prise bolts go, and on which the handspike rest, when used in raising the breech of the gun, &c.

Breast Plates, the two plates, on the face of the carriage, on the other cheek.

Breast Ptates, the clasps, with ornamented heads, by which the cross belts in the army are attached.

Train Plates, the two plates on the cheeks at the train of the carriage.

Dulidge Plates, the six plates on the wheel of a gun carriage, where the fellies are joined together.

PLATEAU, *Fr.* A flat piece of wood, which is sometimes used to place mortars on, &c.

PLATEBANDES, *Fr.* Cap-squares. A particular part of a piece of ordnance, which, though of a flat form or figure, rises beyond the rest of the metal, and is always cast before the moulding. There are three sorts of platbands upon a regular piece of ordnance, viz. capsquare and moulding at the breech; capsquare and moulding of the first reinforce; capsquare and moulding of the second reinforce.

Platebandes *d'affuts*, Fr. Iron capsquares, which serve to keep the trunnions fast between the cheeks of a piece of ordnance.

PLATFORM, (*Platforme*, Fr.) The upper part of every brick or stone building which is arched and has more floors than one, is so called. Hence the platform of a tower, or of a redoubt. All pieces of ordnance that are planted on a rampart, or are disposed along the lines of a besieging army, &c. have their platforms.

PLATFORM, in *gunnery*, is a bed of wood on a battery, upon which the guns stand; each consisting of 18 planks of oak or elm, a foot broad, 2 1-2 inches thick, and from 8 to 15 fee long, nailed or pinned on 4, 5, or 6 beams, from 4 to 7 inches square, called sleeper. They must be made higher behind than before by 6 or 9 inches, to prevent too great a recoil, and to advance the gun easily when loaded. They are from 18 to 20 feet long, 8 feet before and 14 or 15 feet behind.

Permanent batteries, if good stone is not to be had, should be made of brick placed on the edge.

PLATFORMS. The common platforms for gun batteries require the following materials for each: 5 sleepers or joists, 6 inches square, 14 feet long.—1 hunter, 8 or 10 inches square, 8 feet long, 14 planks, 1 foot wide, 11 feet long, 2 1-2 inches thick.—20 pickets.

The usual slope of platforms for guns is one inch to every yard.

The platforms for mortar batteries are made with 3 sleepers 8 inches square, and covered with about 11 timbers of the same thickness. They are laid perfectly horizontal, about 15 feet asunder, and 12 feet from the epaulement. This is the distance commonly practised for firing only at 15 degrees elevation; but if the platforms be placed at the undermentioned distances from the epaulement, the mortars may be fired at the angles corresponding

At 13 feet distance for firing at 30 degrees.
21 feet . . at 20
30 feet . . at 15
40 feet . . at 10

over an epaulement of 8 feet high. See Battery.

PLATINE *de lumicre*, Fr. The same as *Plaques de Plomb*, as far as it regards cannon. With respect to musquets and other firearms, it means that part of the hammer which covers the pan.

PLATOON, in *military affairs*, was formerly a small body of men, in a battalion of foot, &c. that fired alternately. A battalion was then generally divided into 16 platoons, exclusive of the grenadiers, which formed 2 or 4 platoons more, as occasion required. At present a battalion is generally divided into wings, grand divisions, divisions, (platoons or companies) subdivisions, and sections; and the word platoon is generally used, to denote a number (from 10 to 20) of recruits assembled for the purpose of instruction, in which case it may be considered as synonimous with company; but a platoon may consist of any number under a battalion.

PLATRAS, *Fr.* Rubbish, such as ashes, pieces of broken brick, mortar, &c. It is used by refiners, for the purpose of distilling saltpetre into proper vessels.

PLATRER, *Fr.* to plaster, to patch, to daub over.

PLAY, is occasionally applied to a military action; as the cannon *play* upon the enemy, &c.

PLEBEIAN. From the Latin *Plebius*, a distinction made between the poor and rich, in a very early period of Rome; which tended to its ultimate destruction. The term is chiefly used in speaking of the ancient Romans, who were divided into senators, knights, plebians, and common.

PLEDGET, the same as *bolster*, *compress*, in surgery, a kind of flat tent, which is laid over a wound, to imbibe the superfluous humors that ooze out, and to keep it clean.

PLEIN *du Mur*, Fr. The main part or body of a wall.

PLEIN *Jouet*, direct shot; or firing so as to hit the mark by the trajectory line.

PLIER, *Fr.* To give way.

Une aile qui PLIE, *Fr.* in a military sense, the wing of an army, which gives way. When this occurs, it behoves a wise and executive general, to send immediate support, for the whole army is endangered by the least impression on that quarter.

PLINTH, the square member which serves as a foundation to the base of a pillar.

PLOMB, *Fr.* literally means lead. It is sometimes used in a military sense, to signify musquet shot, &c.

A Plomb, *Fr.* The perpendicular position of any body or substance. *Une muraille est à plomb.* A wall built in a straight perpendicular direction.

Donner à plomb, Fr. To fall vertically, as the rays of the sun do in certain latitudes.

Etre à plomb, Fr. To stand upright.

Marcher à plomb, Fr. To march with a firm, steady pace.

This word is sometimes used as a substantive, viz. *Perdre son a plomb.* To lose one's balance.

Manquer d'a plomb, Fr. To be unsteady.

PLONGEE, *Fr.* A term used in artillery to express the action of a bomb, &c. which from the highest point of the curve it describes, takes a downward direction to strike its object.

Plongee *du Rampart*, Fr. The slope of the upper part of the parapet, belonging to the rampart, is so called. The slope is likewise named *talus supérieur*, or upper talus.

PLONGEONS, *Fr.* Artificial fireworks, which are shot into water and rise again without being extinguished.

Plongeons, *Fr.* Plungers or divers. Men of this description ought always to accompany an army, for the purpose of swimming under bridges of boats, &c. and making apertures in their bottoms.

PLONGER, *Fr.* To plunge any thing into the water. This word is likewise used to express the discharge of ordnance from top to bottom, as *canon plongé*.

PLUIE *de feu*, Fr. literally a shower or rain of fire. It signifies a certain quantity of artificial fireworks, whose discharge falls in regular sparks, without ever deviating into a serpentine direction.

PLUMB, PLUMMET, a leaden or other weight let down at the end of a string, or piece of catgut, to regulate any work in a line perpendicular to the horizon, or sound the depth of any thing. It is of great use to the artillerist, as well as to the engineer.

PLUME, feathers worn by soldiers in the hat or helmet.

PLUMET, *Fr.* plume, feather. An ornament which is worn by military men in their hats. It succeeded the pannache or bunch of feathers, that formerly adorned the helmets.

PLUMMET. This word is derived from the Latin *Plumbum*, lead, as a piece thereof is fastened to the end of a thread. The instrument itself is used by masons, &c. to draw perpendiculars with, in order to judge whether walls, &c. be upright planes, horizontal, &c. Pilots, at sea, likewise ascertain their soundings by it. In the forming of recruits it is used to fix lines.

Plummets which vibrate the required times of march in the minute, are of great utility, and can alone prevent, or correct uncertainty of movement; they must be in the possession of, and be constantly referred to by each instructor of a squad.

A musquet ball suspended by a string which is not subject to stretch, (and must of course be kept constantly dry) and on which are marked the different required lengths, will answer the above purpose, may be easily acquired, and should be frequently compared with an accurate standard in the adjutant's, or serjeant-major's possession. The length of the plummet is to be measured from the point of suspension to the centre of the ball.

Accurate distances or steps of 24 inches must also be marked out on the ground, along which the soldier should be practised to march, and thereby acquire the just length of pace.

PLUNDER, hostile pillage, or spoils taken in war.

PLUS, in algebra, commonly denotes majus, more, or addition: its character is +. Thus 5 + 7 is read 5 *plus* 7, or 5 added to 7 is equal to 12.

PLUTEUS, a defensive machine, which was used by the ancient Romans. It was composed of wicker hurdles laid for a roof on the top of posts, which the soldiers, who went under it for shelter, bore up with their hands. Kennett, in page 238, of his Roman Antiquities, observes, that some will have them, as well as the vineæ, to have been contrived with a double roof; the first and lower roof of planks, and the upper roof of hurdles, to break the force of any blow, without disordering the machine. The plutei, however, were of a different figure from the vineæ, being shaped like an arched sort of waggon; some having three wheels, so conveniently placed, that the machine would move either way, with equal ease. They were put much to the same use as the *musculi*. Father Daniel, the Jesuit, in his history of the French militia, makes mention of this machine. He quotes a passage out of a poem, intituled the Siege of Paris, by Abbon, the Monk; the meaning of which is, that the Normans brought up a large quantity of machines, that were called *plutei* by the Romans, and that seven or eight soldiers could be put under cover beneath them. He further adds, that these machines were covered with bull hides.

The moderns have imitated these plutei by adopting mantelets. The chevalier Folard mentions having seen one at the siege of Phillipeville, of a triangular figure, made of cork, interlaced between two boards, and supported by three wheels that turned upon a pivot.

PLUSH, a kind of stuff with a sort of velvet nap or shag on one side, consisting of a woof of a single woollen thread, and a double warp; the one of two woollen threads twisted, the other goat's or camel's hair; though there are plushes entirely of worsted, others of hair, and others again of silk, cotton, &c. White plush breeches have been often worn by dragoons. They resist moisture, and are easily cleaned.

PNEUMATICS. The doctrine of the air, or the laws whereby it is condensed, rarefied, gravitated, &c.

PNEUMATIC *Engine*, denotes the air pump.

PNEUMATIQUE, *Fr.* Pneumatics.

POIDS, *Fr.* Weights.

POIDS *de Marc*, *Fr.* Avoirdupois weight.

POIDS *Romain*, *Fr.* Troy weight.

POIDS *à peser l'eau*, *Fr.* Waterpoise.

Etre de POIDS, *Fr.* To weigh.

Avec POIDS *et mesure*, *Fr.* With care and circumspection.

POIGNARD, *Fr.* Dagger, poniard.

Coup de POIGNARD, *Fr.* A stab.

POIGNARDER, *Fr.* To stab.

POIGNEE, *Fr.* Handful. *Poignée d'hommes*; a handful of men; a small number.

POIGNEE, *Fr.* Handle of a sword.

La POIGNEE, *Fr.* The handle.

POIL, *Fr.* Hair. *Monter un cheval à* POIL. To ride a horse without a saddle.

Un brave à trois POILS, *Fr.* A figurative expression to describe a bully, or gasconading fellow.

POINCON, *Fr.* A puncheon, bodkin. It is likewise an instrument which is used in the making of artificial fireworks, being called *poincon à arrêt*, from a piece of iron running cross-ways near the point, to prevent it from entering too far

POINT, in geometry, according to Euclid, is a quantity which has no parts, being indivisible; and according to others, that which terminates itself on every side, or which has no boundaries distinct from itself. This is a mathematical point, and is only conceived by the imagination; yet herein all magnitude begins and ends, its flux generating a line, that of a line a surface, &c. A line can only cut another in a point.

POINT, *in perspective*, denotes various places with regard to the perspective plane, viz. *point of sight*, or *of the eye*, or *principal point*, is a point in the axis of the eye, or in the central ray, where the same is intersected by the horizon.

POINT, or points of distance, in perspective, is a point or points, for there are sometimes two of them placed at equal distances from the point of sight.

Accidental POINTS, or *Contingent* POINTS, in perspective, are certain points wherein such objects as may be thrown negligently, and without order, under the plan, do tend to terminate. For this reason they are not drawn to the point of sight, nor the points of distance, but meet accidentally, or at random in the horizon.

POINT *of the front*, in perspective, is when we have the object directly before us, and not more on one side than the other, in which case it only shews the foreside; and if it be below the horizon, a little of the top too, but nothing of the side, unless the object be polygonous.

Third POINT, is a point taken at discretion in the line of distance, wherein all the diagonals drawn from the divisions of the geometrical plane concur.

Objective POINT, a point on a geometrical plane, whose representation is required on the perspective plane.

POINT *of concourse*, in optics, is that wherein converging rays meet, more commonly called the focus.

POINT *of dispersion*, is that wherein the rays begin to diverge, usually called the virtual focus.

POINT. This term is frequently used in a military sense. As *point of intersection*, *intermediate point*, *&c.* The several applications of which may be seen in the general rules and regulations.

Covering POINT, a point which in changes of position materially concerns the movement of one line with another.

When a change of position is made on a flank or central point of the first line, the movement of its *covering point* of the second line, determines the new relative situation of that second line.

To find this point, it is necessary to premise, that if a circle is described from any point (A) of a first line (AE) with a radius equal to the distance betwixt the two lines; then its covering point (a) at that time in the second line will be always in the circumference of that circle, at such place as the second line becomes a tangent to the circle. Should the first line, therefore, make a change of position (AR) either on a flank or central point (A); its covering point (a) will move so as still to preserve and halt in its relative situation (a 2) and by the movement and halt of that point preceded by the one (d) of *intersection*, every other part of the second line, either by following them, or by yielding from them, is regulated and directed. Betwixt the old and new situation of the covering point (a) and equidistant from each, lies the *point* (d) where the old and new positions of the second line *intersect*, and which is a most material one in the movement of that line.

Point *of honor*. See Honor.

Point *of Appui*, the point upon which a line of troops is formed. When the right stands in front, and the column is marching to form, the first halted company, division, &c. is the point of appui. Thus when the right is in front the distant point of formation is the left.

Point *of Intersection*, the point where two lines intersect each other.

Intermediate Point. In marching forward that is called an intermediate point which lies between the spot marched from, and the spot towards which you are advancing. In forming line, the centre point between the right and left is the intermediate point. It is of the utmost consequence to every body of troops, advancing or retreating, but especially in advancing towards the enemy, to find an intermediate point between two given, and, perhaps, inaccessible objects. The line of march is preserved by these means in its perpendicular direction, and every column may be enabled to ascertain its relative point of entry in the same line.

Point *of Alignment*, (*Point d'alignement*, Fr.) The point which troops form upon and dress by.

Point *of Formation*, a point taken, upon which troops are formed in military order.

Perpendicular Point, the point upon which troops march in a straight forward direction.

Relative Points, the points by which the parallelism of a march is preserved.

Point *of passing*, the ground on which one or more bodies of armed men march by a reviewing general.

Point *to salute at*, the spot on which the reviewing general stands. This, however, is not to be understood literally; as every infantry officer when he arrives within six paces of the general, recovers his sword and drops it, keeping it in that situation until he shall have passed him a prescribed number of paces. The cavalry salute within the breadth of the horse's neck, the instant the object is uncovered.

Point *of War*, a loud and impressive beat of the drum, the perfect execution of which requires great skill and activity. The point of war is beat when a battalion charges.

Point *du jour*, Fr. break of day; dawn.

Point *de vue*, Fr. prospect, sight, aim.

De point *en blanc*, Fr. point blank.

A point, *Fr.* in time.

A point *nommés*, Fr. seasonably.

La pointe, *Fr.* the point of the sword.

Point is also a steel instrument of various use in several arts. Engravers, etchers, wood-cutters, stone-cutters, &c. use points to trace their designs on copper, wood, or stone.

Point *blank*, (*But en blanc*, Fr.) in gunnery, denotes the shot of a piece levelled horizontally, without either mounting or sinking the muzzle. In shooting thus, the bullet is supposed to go in a direct line, and not to move in a curve, as bombs and highly elevated random shots do. We say supposed to go in a direct line, because it is certain, and easily proved, that a shot cannot fly any part of its range in a right line strictly taken; but the greater the velocity, the nearer it approaches to a right line; or the less crooked its range.

For the point blank ranges of different pieces of ordnance, see the different natures.

The French *point blank* or *but en blanc*, is what the English artillery call the *line of metal elevation*; in most guns between one and two degrees.

Pointer, *Fr.* to point; as, *pointer un canon*. To point a cannon.

POINTEURS, *Fr.* Levellers. Officers in the old French artillery, who were subordinate to the extraordinary commissaries; but who were never employed except upon field service.

Points *d'appui*, Fr. Basis, support. The general signification of this term expresses the different advantageous posts, such as castles, fortified villages, &c. which the general of an army takes possession of in order to secure his natural position. In a more limited sense, they mean those points which are taken up in movements and evolutions. See Point d'appui. *Am. Mil. Lib.*

POINTING *of a gun or mortar*, is the placing either one or other, so as to hit the object, or to come as near it as possible.

To POISON *a Piece*, (*Enclouer une pièce*, Fr.) in gunnery, to clog or nail it up.

POISSON, *Fr.* literally means fish.

POITREL, armor for the breast of a horse.

POIX, *Fr.* pitch.

Poix *resine*, Fr. Rosin.

POLACRE, *Fr.* A lappel coat.

POLACRE, or *Polaque*, Fr. a Levantine vessel, which carries a smack sail on the mizen and mizen mast, and square sails on the main mast and bowsprit.

POLAIRE, *Fr.* Polar.

POLE, in a four wheel carriage, is fastened to the middle of the hind axletree, and passes between the fore axle-tree and its bolster, fastened with the pole-pin, so as to move about it; keeping the fore and hind carriages together. It is also called the *tongue*.

POLES, in castrametation, long round pieces of wood, by which a marquee or tent is supported. There are three sorts, viz.

Ridge Pole, a long round piece of

wood, which runs along the top of an officer's tent or marquee, and is supported by two other poles, viz.

Front Pole, a strong pole, which is fixed in the front part of an officer's tent or marquee, and is kept in a perpendicular position by means of two strong cords, called weather cords, that run obliquely from each other, across two other cords from the rear pole, and are kept fast to the earth by wooden pegs.

Rear Pole, a strong pole, which is fixed in the back part of an officer's marquee or tent, and is kept in the same relative position as has been described above.

Fire **POLES**, or *Rods*, artificial fireworks. They are generally of the length of ten or twelve feet, and of the thickness of two inches at most. One of the ends of the fire pole is hollowed out with three or four flutes to the length of two or three feet. Into one of these flutes are fixed rockets or squibs. Paper crackers are fixed in the others. After holes have been bored through the body of the pole, in order that the rockets may have communication with the crackers, they must be neatly wrapped in paper, the more effectually to deceive the spectators.

POLEAXE, an axe fixed to the end of a long pole. See Battle Axe.

POLICE, *Fr.* in a military sense, among the French, this term comprehends the inspectors, the treasurers, the paymasters, the commissaries, the provost marshal, &c.

Police *d'assurance*, Fr. a policy of insurance.

POLICY *in war*. See Stratagem.

POLITICAL, relating to policy, or civil government.

POLITICS, (*Politique*, Fr.) a part of ethics which consists in the governing of states, for the maintenance of the public safety, order, and good morals.

POLK, *Fr.* a Polish term, signifying a regiment, from whence is derived polkowink, colonel.

POLLAM, *Ind.* a measure equal to twenty ounces: forty make a viz in weight in Madras.

POLL *Money*, commonly called poll-tax, or capitation.

POLTROON, (*Poltron*, Fr.) a coward, a dastard, who has no courage to perform any thing noble. The etymology of poltron or poltroon, as it is usually pronounced, is curious. Both in ancient and modern times frequent instances have occurred of men, who had been forcibly enlisted, having rendered themselves unfit for service by cutting off their thumbs or fingers. When this happened among the Romans, they were called *Pollice trunci*. The French, (as they do in most of their words that are derived from the Latin) contract these two, and by an elision make poltron or poltroon, from whence we have adopted the term. Another, and in our opinion a more correct derivation, comes from the Italian *Poltrone*, which takes its derivation from *Poltro*, a colt; because of that animal's readiness to run away; or *Poltro*, a bed, as pusillanimous people take a pleasure in lying in bed. This last word is derived from the high Dutch *Polster*, which signifies a bolster or cushion. This contemptible character is so little calculated for a military life, that the slightest imputation of cowardice is sufficient to render an individual unworthy of serving among *real* soldiers. Poltroon and coward stand, in fact, foremost in the black catalogue of military incapacities. Every young man, therefore, ought well to weigh, examine, and digest the necessary qualifications for a profession, which, above all others, exacts a daring spirit, and an unqualified contempt of death.

POLIGARCHY, (*Polygarchie*, Fr.) a government composed of many chiefs or leaders.

POLYGARS, *Ind* Chiefs of mountainous and woody districts in the peninsula, who pay only a temporary homage.

POLYGON, (*Polygone*, Fr.) is a figure of more than four sides, and is either regular or irregular, exterior or interior.

Regular Polygon, is that whose angles and sides are equal. It has an angle of the centre, and an angle of the polygon. The centre of a regular polygon, is the centre of a circle, which circumscribes the polygon; that is, whose circumference passes through all the angles of the figure.

Irregular Polygon, is that whose sides and angles are unequal.

Exterior Polygon, that whose lines touch the points of the flanked angles, when a place is fortified inwards.

Interior Polygon, that outward fortification which makes the angles of the gorget; so that the whole bastion is without the polygon.

POLYEDRE, *Fr.* See Polyedron.

Lunettes Polyedres, *Fr.* Magnifying glasses.

POLYEDRICAL, } having many
POLYEDROUS, } sides.

POLYEDRON, a solid figure or body consisting of many sides.

POLYGRAPHIE, *Fr.* See Polygraphy.

POLYNOMIAL, (*Polyname*, Fr.) an algebraical term, signifying a quantity made up of many others by means of the sign + or *more*, and the sign — or *less*.

POLYORCETE, *Fr.* a term used among the French to distinguish great warriors. It literally signifies the taking of strong towns. Marshals Saxe and Lowendalh, *les grands Polyorcetes* of the last century.

POLYTECHNIQUE, } a word de-
Ecole Polytechnique, } rived from the Greek, and used by the French to distinguish an establishment in which

sciences are taught. The military school, which existed during the French monarchy, is comprised in this institution. See Military School.

POMADA, an exercise of vaulting the wooden horse, by laying one hand over the pommel of the saddle.

POMERIUM, in ancient architecture, that space of ground which lay between the walls of a fortified town and the inhabitants' houses. The term is still used among modern architects, particularly by the Italians, as Peter Cataneo, and Alghiri, to describe the breadth of the terre pleine of rampart, its inward talus, and the vacant space which is usually left between this talus and the houses of the town.

POMMEL, (*Pommeau*, Fr.) a piece of brass or other substance, at top, and in the middle of the saddle bow, to which are fastened the holsters, stirrip leathers, &c.

POMMEL, the knob at the extremity of the handle that balances the blade of the sword; also the protuberance on the fore part of a saddle.

POMMES, *Fr.* round pieces of wood which are variously used for ornament, &c.

Pommes *de Pavillon et d'enseigne*, Fr. the piece of wood which is fixed at the top of the color staff, &c.

POMPE, *Fr.* See Pump.

Pompe *de mer*, Fr. a sea pump, or a pump used on board a ship.

Pomper, *Fr.* to pump.

PONANT, *Fr.* the west. In the French sea-service, *ponant* signifies that part of the ocean which is separated from the seas in the Levant by the streights of Gibraltar.

Officier Ponantin, *Fr.* one who serves upon the ocean.

Armée Ponantine, *Fr.* the army of the west.

PONCEAU, *Fr.* a small bridge of one arch, which is thrown across a canal or rivulet.

PONCER, *Fr.* to rub, or pounce upon any thing.

PONIARD, a little pointed dagger, very sharp edged.

PONT *d'or*, Fr. a figurative expression which the French use, when they suffer an enemy, whom they have defeated, to retire without molestation. Hence *faire un pont d'or à son ennemi*. To suffer your enemy to escape.

PONTE, *Fr.* covered in, as a vessel is which has a deck.

PONTON, *Fr.* A bridge; a machine made like a batteau or boat, of copper or tin, upon which planks are laid over which troops pass as on a bridge. See Pontoon.

Pontonier, *Fr.* Lighterman.

PONTS *flottans*, Fr. See Floating Bridge.

Pont *levis*, Fr. See Drawbridge.

Pont *tournant*, Fr. a moveable bridge. It is of the nature of a drawbridge, with this difference, that it turns upon a pivot, and goes entirely round.

Pont *de bois*, Fr. a wooden bridge.

Pont *de corde*, Fr. a bridge of ropes.

Pont *de jonc*, Fr. a bridge of rushes.

Pont *suspendu*, Fr. a hanging bridge.

Pont *de sortie*, Fr. a sally bridge.

Pont *dormant*, Fr a wooden bridge, which is generally laid upon the fosse of a fortified town, for the purpose of maintaining a constant communication between the main body of the place and the outworks and country round. These bridges are not thrown entirely across the fosses, but terminate within twelve or fifteen feet of the revetement; the space from thence is supplied by drawbridges. When the *ponts dormans* are very long, a swing bridge is constructed in the centre of it. When the ditches are wet, and so constantly supplied with water that the depth of it is generally the same, bridges of boats may be used instead of *ponts dormans*. And in cases of attack, floating bridges may be substituted in lieu of both.

PONTON, *or* PONTOON, a kind of flat bottomed boat, whose carcass of wood is lined within and without with tin: they serve to lay bridges over rivers for the artillery and army to march over. The French pontoons, and those of most other powers, are made of copper on the outside: though they cost more at first, yet they last much longer than those of tin; and, when worn out, the copper sells nearly for as much as it cost at first; but when that of tin are rendered useless, they sell for nothing. The British pontoons are 21 feet long, 5 feet broad, and depth within 2 feet 3 inches.

PONTOONS. Length at top, 21 feet 6 inches. Length at bottom, 17 feet 2 inches. Width, 4 feet 9 inches, or 5 feet. Depth, 2 feet 3 inches.

Equipage of one Pontoon.

	ft.in.	ft.in.	in.
4 Baulks	22 8 long	1 0 wide	4 thick.
1 Gang-board.	22 0 ——	1 0 ——	2½ ——
6 Cheeses,	11 6 ——	2 4 ——	1½ ——

2 Oars.
1 Anchor.
1 Graplin.
1 Setter.
4 Iron bolts, with keys.
2 mounting bars.
4 Binding sticks.
4 Spring lines.
4 Faukes.
1 Cable.
1 Sheer-line.
1 Boat hook.
1 Maul.
4 Pickets.
1 Small pump.
1 Windlass.
1 Pontoon carriage, complete.

Dimensions of colonel Congreve's Wooden Pontoons.

Length at top	.	26 feet.
——— at bottom	.	23 ———
Depth	. .	28 inches.
Width	. .	23 ———

The common pontoons will support a weight of 4 or 5000 pounds. They are generally placed, in forming a bridge, about their own width asunder. See Bridge.

Pontoon *carriage*, was made with two wheels only, and two long side pieces, whose fore-ends are supported by a limber; and served to carry the pontoon, boards, cross timbers, anchors, and every other thing necessary for making a bridge; but better experience places them on four wheels.

Pontoon *bridge*, is made of pontoons, slipped into the water, and placed about five or six feet asunder; each fastened with an anchor, when the river has a strong current, or to a strong rope that goes across the river, running through the rings of the pontoons. Each boat has an anchor, cable, baulks, and chests. The baulks are about 5 or 6 inches square, and 21 feet long. The chests are boards joined together by wooden bars, about 3 feet broad, and 21 feet long. The baulks are laid across the pontoons at some distance from one another, and the chests upon them joined close; which makes a bridge, in a very short time, capable of supporting any weight.

POOLBUNDY, *Ind.* a dam to prevent inundations; an embankment; a dyke.

POONA, *Ind.* a day fixed for the Zemindars to bring in their balances for the year.

POONEA, *Ind.* the Indian name of a month.

POOR, indigent, necessitous, oppressed with want.

Poor *in resources and expedients*, of a limited conception; of a narrow understanding; unequal to an arduous enterprise.

POOR *or* PORE, *Ind.* when it terminates a word, means town, or city; as Viziapore, &c.

POOSE, *Ind.* the name of a month following *Aughun*: it in some degree accords with December and January.

POOSHTAY *Bundee*, Ind. embankments of rivers. It likewise means bridges thrown over rivers.

POOSKUT, *Ind.* a small weight, measuring eight koonchys, or sixty four handfuls; one koonchy being equal to eight handfuls.

PORSTICK *method*, in mathematics, is that which determines when, by what means, and how many different ways, any problem may be resolved.

PORPHYRE, *Fr.* porphyry. A fine red marble.

PORT, *Fr.* a harbor.

Fermer les PORTS, *Fr.* to lay a general embargo upon shipping. During the French monarchy this practice frequently occurred for the purpose of securing able bodied seamen.

Port, *Fr.* This word is likewise used to express the tonnage of a vessel.

PORTAL, (*portail*, Fr.) the front or facade of a large building, where the principal gate stands.

To Port, to carry.

Port *arms*, a word of command which has been adopted during the present war, and is practised in the British army. It consists in bringing the firelock diagonally across the chest from the *carry*. This position of the musquet affords a great facility to the person who inspects the touch-hole, &c. In dismissing guards, preparing to charge, &c. soldiers are ordered to *port arms*. The French do not practise this method. Their word of command, *haut les armes*, corresponds with out *recover*.

PORTCLUSE, *or* PORT *cullice*, in *fortification*, is an assemblage of several large pieces of wood, joined across one another like a harrow, and each pointed with iron at the bottom. They are sometimes hung over the gate-way of old fortified towns, ready to let down in case of a surprise, when the gates could not be shut.

Port-*fire*, in *artillery*, a composition put in a paper case to fire guns and mortars, instead of a lint-stock and match. See Laboratory Works.

PORTGLAVE, *Fr.* See Porte-Epee.

Port *de l'arme*, Fr. the carriage of the firelock.

Porte *drapeau*, } Fr. the person who
Porte *enseigne*, } carries the colors.

Port *étendard*, Fr. the standard bearer.

Porte *feu*, Fr. a machine made of wood or copper, by which fire is communicated to gunpowder in a shell, fuse, or piece of ordnance. It is sometimes made of pasteboard. Where there is any ground to apprehend that a cannon will burst, the priming made of a certain composition is put into the pasteboard case, by which means the cannoneer has time to retire before any accident can happen.

Porte *feu*, Fr. is likewise used among artificers to signify all sorts of fusees or matches, by which fire is communicated to many quarters at once. They last according to the nature of the composition with which they are made up.

Porte *feu brisé*, Fr. in artificial fire-works, a species of carriage which is bent into a curve by means of a sloping piece of wood.

Porte *voix*, Fr. a speaking trumpet.

Porte *mousqueton*, Fr. a swivel.

Porte *arquebuse*, Fr. the king's gun-bearer.

Porte *epée*, Fr. a sword bearer. It likewise means a sword belt.

Porte, *Fr.* a gate. *Portes d'une ville.* The gates of a fortified town.

Porte *d'ecluse*, Fr. a flood gate.

Porte *de secours*, Fr. the gate in a citadel, which has an outlet towards the country, is so called. By means of this gate the garrison can always receive succors or reinforcements, in cases of civil insurrection, or under circumstances of surprise.

PORTEE *du fusil*, Fr. by this expression the French generally understand the distance which a musquet-shot goes to its ultimate destination It is supposed to vary from 120 to 150 toises.

Portee *des pièces*, Fr. the flight, range, or reach of cannon

Portee *à tout volée*, Fr. the flight of a cannon shot when it makes an angle of something under 45 degrees with the horizon, or level of the country. In this manner it completes the greatest possible range.

Portee *de but en blanc*, Fr. the forward direction and flight of a ball, constituting a straight line, which it describes from the mouth of the piece to its ultimate object. It has been generally found, by experience that the distance so described, could not exceed 300 toises. Beyond that, the ball has been known to deviate. According to Belidor, pieces of ordnance will carry farther in the morning and at night, when the weather is cool and rarefied, than in the middle of the day, or at noon, when the heat of the sun prevails. This circumstance is amply discussed in his *Bombardier Francois;* and his observations were proved to be correct by experiments made in June, 1744, at Essonne. These experiments commenced at seven o'clock in the morning, and lasted till twelve. It was remarked, that the shells, which were thrown out of three mortars, gradually fell short of their original range. Besides the *portée a toute volée*, and the *portée de but en blanc*, or the full range and the point blank shot, there is the *ricochet*, which marshal Vauban invented See **Ricochet**.

PORTER, *Fr.* to carry. It is a marine term; as *porter toutes ses voiles*. To carry all her sails. It is likewise used as a word of command, viz. *Portez vos armes*. Carry arms.

Porter *une botte*, Fr. to make a thrust or pass.

PORTES *d'une ville de guerre*, Fr. openings which cross the ramparts of a fortified town or place, and are generally arched over. These openings are usually made in the middle of the curtain, between two bastions. They are from nine to ten feet broad, and from thirteen to fourteen feet high. The gates are mostly decorated with trophies of war: and in some instances a very superfluous magnificence is exhibited.

PORTEURS *d'eau*, Fr. *Water carriers.* In India they are called *Beesties.* Amongst the Turks the Sakkas, or water-carriers, are taken from the lowest rank of soldiers belonging to the Capikuly infantry. The number of these men depends upon the nature of the service on which the turks are employed. They are under the orders of the officers who command companies; and although their situation is not only the most degrading, but the most laborious in the army, they may nevertheless become soldiers. Their dress consists of brown leather; and from the continual fatigue which they undergo, their appearance is wretched in the extreme.

PORTFIRE, a composition of meal powder, sulphur, and saltpetre, driven into a case of paper to serve instead of a match to fire guns.

Portfire *composition.* Saltpetre, 60 parts; sulphur, 40 parts; mealed powder, 20 parts. Length of each, 16 1-2 inches.

One will burn from 12 to 15 minutes.

Weight of one dozen, 3 lbs. 12 oz.

Portfires were made at Gibraltar in the following manner; two ounces of nitre was dissolved in a gallon of water, and sheets of soft brown paper dipped in the solution: these when dry were rolled up to about the size of common portfires. See English *New Annual Register*, 1807, for an article on wooden portfires.

PORT-FOLIO, in a general acceptation of the term amongst us, is a species of large leathern case, made like a pocket book, and calculated to carry papers of any size. Among the French it not only signifies the same thing, but likewise a box, made of pasteboard, in which are contained the several papers that relate to any particular department The adjutants, quarter-masters, &c. belonging to the staff, should be provided with port folios for the purpose of keeping their reports, &c. in regular order.

PORT-GLAIVE, from the French *porteur* and *glaive*. One who carries the sword before a prince or magistrate.

PORT-HOLES, in a ship, are the embrasures or holes in the sides of a ship, through which the muzzels of cannon are run.

PORTIERES, *Fr.* Two pieces or folds of wood which are placed in the embrasure of a battery, and which close the instant the piece has been fired. They serve to cover the cannoneers from the aim of the enemy, and to resist the discharge of musquetry. They are, however, seldom or ever used except when the batteries stand close to the counterscarp.

PORTICO, *(portique*, Fr.) in architecture, a kind of ground gallery, or piazza, encompassed with arches supported by columns, without any immediate relation to doors or gates, where people walk under cover. The roof is commonly vaulted, sometimes flat. The ancients called it *Lacunar*.

PORTMANTEAU, *(Valise*, Fr.) a

cloak bag to carry necessaries in a journey. It is sometimes made of leather.

PORTMOTE, a court held in port towns, as swanimote was in the forest.

PORT *ropes*, in a ship, such ropes as serve to haul up and let down the ports on the port holes.

POSE, (*grandepose*, Fr.) a French military term, signifying the extraordinary centinels or guards, which after retreat beating are posted in a fortified town or place, for the safety of certain specific quarters. The corporals who post the centinels are directed to instruct them, not to suffer any person to go upon the ramparts, unless he belong to the night patrole or rounds, &c. These extraordinary guards are relieved at daybreak.

POSER, *Fr.* to lay down. It is used as a word of command in the French artillery, &c. viz. *Poser vos leviers*; lay down your levers.

POSER *une sentinelle*, Fr. to post a centry.

POSES, *Fr.* the centries that are posted.

Priming POSITION, in the old manual exercise. In firing three deep the priming position for the front rank is the height of the waistband of the breeches; for the centre rank about the middle of the stomach; and for the rear rank close to the breast. The firelock in all the positions is kept perfectly horizontal.

But in the modern exercise, the rear rank does not fire; but loads for the centre rank, whenever they form in three ranks, the whole are quarter faced to the left, so that the firelock of each has an interval; and all the firelocks are held equally high on the right hip.

Position, (*Position*, Fr.) This word is variously used in a military sense, both by the French and English. It is applicable to locality; as the *army took an excellent position*; or drew up upon very advantageous ground, and in a very advantageous manner. Frederic the great, of Prussia, has laid it down as a maxim, that no army should take up a position in rear of a forest, since it is thereby prevented from observing the movements of the enemy, and from counteracting their plans.

Position *of the soldier without arms*. The equal squareness of the shoulders and body to the front is the first and great principle of the position of the soldier: the heels must be in a line, and two inches apart: the knees straight, without stiffness: the toes turned out, so that the feet may form an angle of about 60 degrees: the arms hang near the body, but not stiff; the flat of the hand, and middle finger, touching the seams of the pantaloons: the elbows and shoulders are to be kept back: The belly rather drawn in; and the breast advanced, but without constraint: the body to be upright, but inclining rather forwards, so that the weight may not bear so much on the heels as on the fore part of the feet: the head to be erect; and neither turned to the right nor to the left; the eyes alone will be glanced to the right.

Position *of the soldier with arms*. The body of the soldier being in the position above described, the firelock is to be placed in his left hand, against the shoulder: the thumb alone to appear in front; the four fingers to be under the butt; and the left elbow a very little bent inwards, so as not to be separated from the body, or to be more backward or forward than the right one: the firelock must rest full on the hand, not on the end of the fingers; the knuckles of the middle finger to press so against the hip joint, as that on raising the left foot from the ground the motion of the joint be felt with the knuckles, and be carried in such manner as not to raise, advance, or keep back, one shoulder more than the other; the butt must therefore be forward, and as low as can be permitted without constraint; the fore part a very little before the front of the thigh; and the hind part of it pressed with the knuckles against the joint. It must be kept steady and firm before the hollow of the shoulder; should it be drawn back, or carried too high, the one shoulder would be advanced, the other kept back, and the upper part of the body would be distorted and not square with respect to the limbs.

The position in which a soldier should move, determines that in which he should stand still. Too many methods cannot be used to supple the recruit, and banish the air of the rustic. But that excess of setting up, which stiffens the person, and tends to throw the body backward instead of forward, is contrary to every true principle of movement, and must therefore be most carefully avoided. If the firelock be carried well in the hand, and against the hip joint, the barrel of the firelock will stand perpendicular, and this will guide the body which should be thrown against the upright firelock, and will be found to agree with the balance of the body upon the fore part of the foot; and conduce to opening the chest and keeping an erect front.

Position *in marching*. In marching, the soldier must maintain, as much as possible, the same position of the body. See March

Change of Position, the positive or relative movement of a body of troops on any given point.

New Positions *that a regiment or line can take with respect to the old one*, are:

Parallel Positions, or nearly so to the old one.

Intersecting Positions by themselves, or their prolongation, some part of the old line or its prolongation.

New parallel Positions being necessarily to the front, or rear of the old one, the regiment will, according to circumstances, take them up by the diagonal march; the flank march of divisions after wheeling into column; or the movement in open column to the new line, and its subsequent formation in it.

New intersecting POSITIONS, which themselves cut the regiment, will, in cavalry movements, be taken up by the diagonal march; or the flank march ranks by three's of divisions. All other new positions, which themselves, or their prolongation, intersect the old line, or its prolongation, will in general be taken up by the march in open column, and its subsequent formations, when it arrives at the line; some such positions will, however, allow of, and and require being made by the echellon march, or by the flank march of divisions. In general the regiment will break to the hand which is nearest to the new position, be conducted to its nearest point in the new line, and form on it as directed.

POSITION *of the officer*. See SWORD.

POSITION *du soldat sans armes*, Fr. position of the soldier without arms.

POSITION *du soldat avec les armes*, Fr. position of the soldier with arms.

POSITION *de l'extension*, Fr. in fencing, position of extension.

POSSEDER, *Fr.* to possess, to be in possession of.

POSSE, an armed power, called out on any particular emergency; as the *posse comitatus*; who may be called out by the sheriff, or marshal, to suppress outrages of the peace.

POSSESSION, to take possession, is the act of occupying any post, camp, fortress, &c. which might facilitate the operations of any army, or which previously belonged to the enemy.

POST, in *war*, a military station; any sort of ground fortified or not, where a body of men can be in a condition of resisting the enemy.

Advanced POST, a spot of ground, seized by a party to secure their front, and the post behind them.

POST *of honor*. The advanced guard is a post of honor: the right of the two lines is the post of honor, and is generally given to the eldest corps: the left is the next post, and is given to the next eldest, and so on. But the laws of military discipline forbid an inconvenient accordance with this practice, as the circumstances of the case may require a very different arrangement, which it would be wanton to oppose. The station of a centinel before the colors, and the door of a commanding officer, is a post of honor.

Advantageous POST. Every situation is so called which an enemy occupies in such a manner, that not only mere force of arms, but great military skill, and many stratagems, are required to dislodge him. We have various instances in history of how much may be done on both sides, when one army has taken up an advantageous post, and another finds it necessary to drive him from it. This subject has been amply discussed in a French work intituled, *Stratagêms de Guerre*, page 71, &c.

POSTS *of exercise in the rear*, the relative situations which officers take in the rear; when the ranks of a battalion are opened for the purpose of going through the manual and platoon exercises. It is likewise a cautionary word of command, viz. *The officers will take post in the rear.*

To POST. In the disposition of troops, to place the officers, music, drummers, fifers, and and pioneers, according to their several ranks and appointments, either for inspection, or exercise in the field.

To POST, to station, as, a sentry, &c.

To be POSTED, in military tactics, to be formed ready for action. Thus when troops are brought up in column, and ordered to deploy, it frequently happens, that some part of the line is refused, in order to flank an enemy, or to cover a weak position, the part that is aligned is said to be posted.

To POST *up*, (*afficher*, Fr.) To hold up to public censure or ridicule.

To be POSTED, in a familiar sense, signifies to be publicly announced as an infamous or degraded character. Hence to post a man as a coward is to stick his name up in a coffee-house or elsewhere, and to accuse him of want of spirit, &c. The French use the phrase *afficher* in the same sense. They likewise say figuratively *afficher sa honte*; to publish or post up one's own disgrace; meaning thereby, that some persons are so totally regardless of decency and decorum, as to express sentiments which are unbecoming the character of an officer, or a gentleman.

POSTAGE *of Letters*. In the British service, non-commissioned officers and private soldiers are privileged to send or receive letters, from any part of that country on payment of one penny only for the postage.

In the instructions to postmasters, (Feb. 4th, 1799,) concerning the exemptions granted to seamen in the navy, and privates in the army, in respect to the postage of their letters, it is specified, that

"No single letter, sent by the post from any seaman or private employed in his majesty's navy, army, militia, fencible regiments, artillery, or marines, shall, whilst such seamen or private shall be employed on his majesty's service, and not otherwise, be charged with an higher rate of postage than the sum of one penny for the conveyance of each such letter; such postage to be paid at the time of putting the same into the post office of the town, or place from whence such letter is intended to be sent by the post.

"Provided, that no such letter shall be exempted from postage, unless there shall be written thereon, in the hand-writing of, and signed by the commanding officer, for the time being, of the ship or vessel, or of the corps, regiment, or detachment to which such seamen or private shall belong, the name of such commanding officer, and of the ship, vessel, corps, regiment, or detachment commanded by him.

"No single letter, directed to any such seamen, or private, upon his own private concerns, only whilst such seaman, or private, shall be employed on his majesty's service, and not otherwise, shall be charged with a higher rate of postage than one penny for each such letter, which penny shall be paid at the time of the delivery thereof.

"Provided, that no such letter shall be exempted from the rates of postage chargeable upon letters, unless any such letter shall be directed to such seaman, or private, specifying the ship, vessel, regiment, troop, corps, company, or detachment to which he may belong: and provided also, that it shall not be lawful for the deputy postmaster of the town or place to which such letter shall be sent to be delivered, to deliver such letter to any person except to the seamen or private to whom such letter shall be directed, or to any person appointed to receive the same by the commanding officer of the ship, &c. to which the seaman, or private to whom such letter shall be directed, shall belong.

"The exemptions do not extend to letters sent to or received from countries independent of England: they do extend to the West India Islands and British America.

"All postmasters are desired to take particular notice that double letters to and from soldiers and sailors and their families, are liable to the full double rates, the same as letters in general; and some postmasters having conceived that letters containing money orders might pass under the exemptions of the act, they are desired to understand, that such letters are chargeable with full double rates also.

"Recruiting serjeants, who may carry on a correspondence with their officers on the recruiting service, cannot send or receive their letters on that service under the exemptions granted by this act.

"The above exemptions granted by the legislature do not extend in the navy to any other than seaman, and not to officers of any description whatever; and in the army, only the privates, with serjeants and serjeant-majors are included. Many officers, both in the army and navy, having construed the act to extend to their own correspondence, it is hereby publicly stated that such a construction is altogether inapplicable."

The act in its literal meaning includes in this indulgence all non-commissioned officers, although they are excluded by this official interpretation.

According to a letter issued from the post office, dated the 18th Sept, 1799, to all postmasters, in addition to the rates above-mentioned, these letters are chargeable with inland postage to and from London, excepting single letters to and from soldiers and sailors, and it is to be left to the opinion of the writers to pay the postage or not on putting them into any post office.

POSTE, *Fr.* a word generally used in the plural number to signify small shot, viz. *Son fusil étoit chargé de douze ou quinze postes;* his gun or musquet was loaded with twelve or fifteen shot.

Poste, *Fr.* This word is always used in the masculine gender when it relates to war, or to any specific appointments; as, *poste avancé*, an advanced post. *Poste avantageux*, an advantageous post. *Mauvais poste*, an unfavorable post. The French say figuratively, *un poste est jaloux;* thereby meaning, that a post is extremely open to an attack, and that the troops in it may be easily surprised.

Postes *de campagne*, Fr. Every construction or groupe of buildings that will admit of being defended, and is consequently tenable, is called a *poste de campagne*, or field work. Of this description are churches, houses, country houses, farm houses, villages, redoubts, &c. in which a sufficient number of men may be stationed for the purpose of holding out against an enemy, until succours can arrive. Chevalier Folard has written upon this subject; and since him, F. Gaudi, with comments and illustrations by A. P. J. Belair, chief of brigade in the French army. We recommend the latter production, which appeared in 1793, to the perusal of every officer The work is intituled, *Instruction addressée aux officiers d'Infanterie pour tracer et construire toutes sortes d'ouvrages de Campagne.* See likewise, *Aide Mémoire pour les officiers d'artillerie* A late work, intituled, *Duties of an Officer in the Field*, &c. by Baron Gross, of the Dutch brigade, is very useful; the whole of this tract is incorporated in the *American Military Library*.

Post *avantageux*, Fr. See Advantageous Post.

Petits postes *separés*, Fr. small detached posts.

Postes *intermédiaires*, Fr. intermediate posts, or men so stationed between different corps, that, in case of urgency, they may with ease advance to the support of that which is more immediately threatened by the enemy.

POSTERN, more frequent a sally-port, is a small door in the flank of a bastion, or other part of a garrison, to march in and out unperceived by an enemy, either to relieve the works, or make sallies.

POSTICHE, *Fr.* any thing fictitious put in room of something that has been real and natural. In military matters, among the French, it serves to distinguish supernumerary or auxiliary soldiers that are taken from one, or more companies, to strengthen any particular body of men.

POSTILION, *Fr.* an express boat which is kept in French seaports for the purpose of carrying and bringing intelligence.

POT, *Fr.* a vessel used in the making of artificial fireworks, &c.

Stink Pot, a vessel filled with combustible matter, which is thrown on various occasions, when men come into close action. The consequences of its explosion are sometimes fatal, and always dangerous.

Pot *à brai*, Fr. an iron pot in which pitch or tar is melted.

Pot *d'une fusée volante*, Fr. the carcase of a fusee.

Pot *à feu*, Fr. a fire pot; a hand grenado.

Pot *à aigrette*, Fr. an artificial firework, the centre of which contains a certain quantity of powder, which upon being inflamed, communicates itself to several other branches, and exhibits the appearance of an aigrette, or cluster of rays, such as issue from diamonds arranged in a particular manner. The aigrette takes its name from a bird so called, whose feathers serve to make up an ornament for the head.

Pot *en tête*, Fr. a headpiece made of iron, which is proof against musquet shot. This headpiece is sometimes placed in the crown of the hat, and is otherwise used by sappers.

POTEAU, *Fr.* a stake, post.

POTEE, *Fr.* Putty.

POTENCE, *Fr.* Troops are ranged *en potence* by breaking a straight line, and throwing a certain proportion of it, either forward or backward, from the right or left, according to circumstances, for the purpose of securing that line. An army may be posted *en potence* by means of a village, a river, or a wood. The derivation of the word may be variously explained, viz. From *Potence*, a gibbet. *Potences*, crutches or supports. *Potence* likewise means a piece of wood which is thrown across two uprights; also a cross table, as *table en potence;* and a measure to ascertain the height of a horse or man.

POTENTAT, *Fr.* See Potentate.

POTENTATE, a sovereign prince, whose power is rendered formidable by the various means of authority which are vested in him.

POTERNE, *Fr.* a postern gate, a sally port.

Poterne, *Fr.* Likewise signifies a secret gate. Gates of this description are made behind the orillons at the extremities of the curtain, in the angle of the flank, and in the middle of those curtains where there are no gates. The sewers generally run under the posternes. Belidor, in his Art of Engineering, recommends small arched magazines to be constructed on the right and left of the paths that lead to these gates.

POUCH, a case of black stout leather with a flap over it, worn by the infantry for the purpose of carrying their ammunition. The pouches in use among the cavalry are smaller.

Pouch *flap*, the outside covering of the pouch. It is made of the stoutest blackened leather and ought always to be substantial enough to turn the severest weather.

POUCE, *Fr.* An inch.

POUDRE, *Fr.* See Gunpowder.

Poudre *muette*, *poudre sourde*, Fr. A species of gunpowder which is free from noise or detonation.

Poudre *fulminante*, Fr. A species of gunpowder which makes a greater noise than the common sort.

Poudre *à gros grains*, Fr. Gunpowder which is used for artillery pieces. It is likewise called *Poudre à Canon*.

Poudre *à musquet*, Fr. Gunpowder used for musquets, and other firearms.

POUDRIER, *Fr.* a gunpowder make. It also signifies an hour glass.

POVERTY, a goddess adored by the Pagans, and familiar to Christians. She was reverenced, as a deity, by the heathens, because they feared her, and was very justly considered as the mother of industry and the fine arts. Among military men, poverty is seldom felt whilst the active duties of the profession are executed with zeal and good sense, and the individuals entrusted with them, are not only paid with punctuality, but are secured in their honest hopes of promotion. Economy is the basis on which every soldier should build his views of personal comfort and security; and if he attend to the perpetual calls of service, he will not fail to realise them. For a life of real service affords no scope for extravagance; and when a good soldier becomes unequal to the hardships it imposes, the nation should provide for him.

POUF, *Ind.* a word used among the blacks to describe the explosion of firearms.

POULEVRIN, *Fr.* Pounded gunpowder.

POULIE, *Fr.* A pulley.

A POUND *sterling*, a money in account, value 20s. in England, marked £.

POUNDAGE, a rate which is allowed for collecting money. Army agents, &c. are entitled to poundage, which consists in a certain deduction from the pay of officers, non-commissioned officers, and soldiers. Agents are not allowed any poundage on the pay of the privates in the militia.

POUNDER, a great gun or piece of ordnance, denominated according to the weight of the ball it carries, as a 6, 12, 24 pounder.

POWDER *Horn*, a horn flask, in which powder is kept for priming guns. Light infantry and riflemen have frequently a powder horn for carrying spare powder.

POURIE, *Ind.* a wooden sandal which is used in India during the wet season.

POURSUITE, *Fr.* Pursuit.

POURSUIVANS *d'armes*, Fr. See PURSUIVANTS AT ARMS.

POURSUIVRE, *Fr.* to pursue.

POURSUIVRE *l'épée dans les reins*, Fr. To pursue with unrelenting activity.

POURTOUR, *Fr.* in architecture, the circumference of any place.

POURVOIR, *Fr.* to provide, to lay in store, &c.

POURVEYEURS *des vivres*, Fr. Purveyors.

POUSSER, *Fr.* to push, to press upon, to drive before you, viz. *Pousser aux ennemis;* to advance rapidly against the enemy. This expression is used in a neutral sense, and relates chiefly to the operations of cavalry.

POUSSER *un cheval*, Fr. To make a horse go full speed.

POUSSIER, *Fr.* the dust which remains after the formation of gunpowder into grains.

POUTRE, *Fr.* a beam.

POUTRELLE, *Fr.* a small beam.

POWDER. See GUNPOWDER.

POWDER-*magazine*, a bomb-proof arched building to hold the powder in fortified places, &c. containing several rows of barrels laid one over another. See MAGAZINE.

POWDER-*cart*, a two wheeled carriage, covered with an angular roof of boards. To prevent the powder from getting damp, a tarred canvas is put over the roof; and on each side are lockers to hold shot, in proportion to the quantity of powder, which is generally four barrels.

POWDER-*mill*, a building in which the materials are beat, mixed together, and grained: they are placed near rivers, and as far from any house as can be, for fear of accidents, which often happen. See MILL.

POWER, a natural faculty of doing or suffering any thing. Mr. Locke, in his Essay on the Human Understanding, considers power under two heads. One he calls active and the other passive power.

POWER, in military affairs as well as in all others, is *knowlege*—of human passions—of arms—of distances—of the skill and numbers of an enemy.

To be in the POWER *of any body*, in a figurative sense, to have committed yourself in such a manner, as to be under the necessity of keeping upon good terms with a person who might injure you by a disclosure of your secrets. To avoid putting yourself in the power of any man, *bear much*, *say little*, and *write less*. These are maxims which every public character ought to attend to; and every general should cautiously follow during an active campaign, when there are frequent occasions to communicate with spies, &c. and he is not unfrequently obliged to hold intercourse with suspected persons.

To be in the POWER *of an enemy*. To have taken up, injudiciously, such a position as to expose you to a defeat whenever the enemy may think proper to attack you.

POWERS *of lines and quantities*, are their squares, cubes, &c. or other multiplications of the parts into the whole, or of one part into another.

Small **POX**. A disease to which most infants, adults, &c. are exposed; and which has been rendered less malignant by inoculation. The introduction of a humor, called the *Cow Pox*, or *Vaccine Matter*, into the human system, has lately been found extremely beneficial. When recruits join a regiment they should be examined respecting this disease; and no time should be lost to *vaccinate* them.

Great Pox, commonly called the venereal disease. Few men are more likely to catch this cruel disorder than soldiers; and in no case ought the attention of the regimental surgeon to be more imperiously engaged than in the speedy cure of it. In the navy, where the disease is often prevalent, the surgeons are entitled to receive a certain sum of money, which is stopped out of the pay of their venereal patients, for extraordinary trouble and attendance. In the army of the U. States the soldiers are treated in this as in all other diseases. The soldier should be liable to stoppages. Every officer of a company, who has the welfare of his soldiers at heart, should examine their linen at the weekly inspections, as the disorder generally manifests itself, particularly in its first stages, in stains upon the shirt.

PRACTICABLE. A word frequently used in military matters to express the possible accomplishment of any object. Hence, "a practicable breach."

PRACTICE, or *gun-practice*. In the spring, as soon as the weather permits, the exercise of the great guns begins, for the purpose of shewing the gentlemen cadets at the British military academy at Woolwich, and the private men, the manner of laying, loading, pointing, and firing the guns. Sometimes instruments are used to find the centre line, or two points, one at the breech, the other at the muzzle, which are marked with chalk, and whereby the piece is directed to the target: then a quadrant is put into the mouth, to give the gun the required elevation, which at first is guessed at, according to the distance the target is from the piece. When the piece has been fired, it is sponged, to clear it from any dust or sparks of fire that may remain in the bore, and loaded: then the centre line is found, as before; and if the shot went too high or too low, to the right or to the left, the elevation and trail are altered accordingly. This practice continues morning and evening for about six weeks, more or less, according as there are a greater or less number of recruits. In the mean time others are shewn the motions of quick firing with field-pieces. There is no practice in the army of the U. States, in which there are officers of ten or twelve years standing who never saw a mortar loaded; but this is the effect of a total want of system.

Mortar PRACTICE, generally thus: a line of 1500 or 2000 yards is measured in an open spot of ground, from the place where the mortars stand, and a flag fixed at about 300 or 500 yards: this being done, the ground where the mortars are to be placed is prepared and levelled with sand, so that they may lie at an elevation of 45, or any required number of degrees; then they are loaded with a small quantity of powder at first, which is increased afterwards, by an ounce every time, till they are loaded with a full charge: the times of the flights of the shells are observed, to determine the length of the fuzes. The intention of this practice is, when a mortar-battery is raised in a siege, to know what quantity of powder is required to throw the shells into the works at a given distance, and at what elevation, and to cut the fuzes of a just length, that the shell may burst as soon as it touches the ground

PRACTICE-*Book*. See BOOK.

To PRACTICE. In a military sense, to go through the manual and platoon exercises, or through the various manœuvres, &c. for the purpose of becoming thoroughly master of military movements. Practice is likewise used, in imitation of the French, to signify the act of effecting or executing any military operation, viz. to practise a mine beneath the covert way, &c.

PRAME, *Fr.* A sort of boat or barge which is used on the canals in France.

PRAME, in *military history*, a kind of floating battery, being a flat bottomed vessel, which draws little water, mounts several guns, and is very useful in covering the disembarkation of troops. They are generally made use of in transporting the troops over the lakes in America. These vessels are well calculated for the defence of large havens and seaports. Belair, in his Elements de Fortification, page 397, strongly recommends the use of Prames in cases of inundation, &c. See the improvements proposed by him in page 316, where he speaks of "*Bateaux insubmersibles*."

Di PRATICA, *Ital.* Free intercourse; admitted to pratique. Persons who, having performed quarantine, are permitted to land in Italy, and mix with the inhabitants.

PRACTICABLE, *Fr.* See PRACTICABLE. This word is in general use among the French, viz.

Les chemins ne sont pas PRACTICABLES. The roads are not passable.

Le gué n'est pas PRACTICABLE *dans ce moment-ci.* The river is not fordable at this moment; verbatim, the ford is not practicable at this moment.

PRATIQUE, *Fr.* Practice. The term likewise signifies, among the French, commerce, intercourse, traffic, &c.

Avoir PRATIQUE *avec des insulaires*, Fr. To trade, or have intercourse with the inhabitants of islands.

Une PRATIQUE *eclairée*, Fr. A project undertaken and put into execution upon solid principles.

Une PRATIQUE, *aveugle*, Fr. A plan ill digested, and executed without discernment or ability.

PRATIQUES, *Fr.* In the plural, this term signifies the same as mal-practices, or secret intelligence with an enemy, viz.

Entrêtenir des PRATIQUES *avec le commandant d'une place.* To hold communication, or keep up a secret correspondence with the commandant of a fortified place.

PRATIQUER *des intelligences*, Fr. To collect, to gather useful information.

Il avoit PRATIQUE *dans cette place des intelligences qui lui ont donné le moyen de la surprendre*, Fr. He had gathered such information, by holding secret intelligence with the inhabitants, as to be able to surprise the place.

PRATIQUER, *Fr.* In architecture, to contrive, to make, to render convenient.

Donner PRATIQUE *à un vaisseau*, Fr. To allow a vessel to enter into port and unload. This expression is used in the Mediterranean under circumstances of quarantine, and comes from *Pratica*.

PRATIQUER, *Fr.* To practice. *Pratiquer une homme;* to try a man; to put his abilities to the test. It likewise signifies to gain over, to suborn.

PRECEDENCE. Priority. Priority in rank or precedence in military life, arises from rank or the date of an officer's commission.

PRECEDENT. Any act which can be interpreted into an example for future times, is called a precedent. Persons in high official situations are extremely scrupulous with respect to precedence, especially in military matters.

PRECIPITER, *Fr.* To precipitate; to urge or hasten on; to do every thing prematurely. This word appears to be used by the French in almost all the senses to which we attach it, especially in military matters.

PRECIPITER *sa retraite*, Fr. Literally signifies, to precipitate one's retreat. It may be taken in a good or bad sense, to signify the act of flying away blindly or rashly, without judgment or discretion; or of urging your retreat under circumstances of imperious necessity, yet with proper caution and foresight. So that to precipitate, both in French and English, signifies, Faire *trés* promptement ou *trop* promptement; to do any thing *very* promptly, or *too* promptly.

PRECISION, exact limitation, scrupulous observance of certain given rules.

PRECISION *of march.* On the leading platoon officer of the column, much of the precision of march depends; he must lead at an equal, steady pace; he must lead on two objects either given to him, or which he himself takes up on every alteration of position; this demands his utmost attention; nor must he allow it to be diverted by looking at his platoon, the care of whose regularity depends on the other officers and non-commissioned officers, belonging to it. The second platoon officer must also be shewn, and be made acquainted with the points on which the first leads; he is always to keep the first officer and those points in a line, and those two officers, together with the guide mounted officers, thus become a direction for the other pivot officers to cover. In marching in open column, the covering serjeants or guides are placed behind the second file from the pivot officers, that the officers may the more correctly see and cover each other in column.

PREDAL, *or* PREDATORY, } *War*, a war carried on by plunder and rapine; such as the British navy and the Algerines; the Buccaneers, also carried on a predal war, against all persons on the high seas.

PREDESTINARIAN. A person who believes in predestination. Every Turk may be considered as a predestinarian. A Turkish soldier is taught to believe that if he falls in battle he will instantly go to heaven. This is a comfortable idea even for christian soldiers. How far it ought to be encouraged, doctors and able casuists must agree.

PREFECT, (*Préfet*, Fr.) a governor or commander of any place or body of men. Among the Romans this was a title of great importance, both in civil and military situations. During the existence of the republic the Præfectus Legio has had a considerable command. The two Alæ, wings, or great divisions of the allies, had each a præfect appointed them by the Roman consul, who governed in the same manner as the legionary tribunes. For a specific account see pages 193, 194, 195, of Kennett's Roman Antiquities. There was likewise, during the time of the Roman emperors, an officer called the præfect of the pretorian band, or body guards. The French have adopted the word in their government. The functions of a modern French prefect correspond almost wholly with those of a governor of a province under the old regime or system.

PREFERMENT, the state of being advanced to a higher post.

PREJUDICE, PREJUGE, *Fr.* Prepossession, judgment formed beforehand, without examination. A celebrated French writer calls it an opinion taken up without judgment, *Le préjugé est une opinion sans jugement. Voltaire.* It is used in two instances, viz. for and against a person.

PRELIMINARY, (*Préliminaire*, Fr.) Previous, introductory, &c. Preliminary, as a substantive, signifies an introductory measure, a previous arrangement. Hence the "preliminaries of peace."

PRENDRE, *Fr.* A French military term. It is variously used, and accords generally with our word *to take*, viz.

PRENDRE *une ville d'assaut; par famine*, &c. To take a town by assault; by famine, &c.

PRENDRE *à droite, ou à gauche*, Fr. To go to the right or left.

PRENDRE *à travers*, Fr. To run across.

PRENDRE *les devants*, Fr. To anticipate, to get the start of any body.

PRENDRE *le pas*, Fr. To take precedence.

PRENDRE *la droite*, Fr. To take the right.

PRENDRE *terre*, Fr. To land.

PRENDRE *le large*, Fr. A term used figuratively to signify the act of running away.

PRENDRE *la clef des champs*, Fr. Literally, to take the key of the country, or to run over it.

PRENDRE *son élan*, Fr. To dart forth, to spring forward.

PRENDRE *un rat*, Fr. A figurative expression used among the French when a musquet or pistol misses fire, *Il voulut tirer, mais son pistolet pris qu'un rat.* Literally, he would have fired, but his pistol only caught a rat.

PRENDRE *langue*, Fr. To seek for information, to obtain intelligence.

PRENDRE *du temps*, Fr. To take time in executing a thing.

PRENDRE *son temps*, Fr. To do a thing with perfect convenience to one's self.

PRENDRE *la parole*, Fr. To speak first.

PRENDRE *sa revanche*, Fr. To make up for any past loss or disadvantage. We familiarly say, to take one's revenge.

PRENDRE *à partie*, Fr. An expression peculiar to the French, in judicial matters, which signifies to attack a judge, for having prevaricated and taken the part of one side against another, without any regard to justice. It likewise means to impute misconduct or criminality, and to make a person responsible for it.

Se PRENDRE *de vin*, Fr. To get drunk. Excess of drinking was so little known among the French officers and soldiers, that the greatest disgrace was affixed to the habit. It is recorded, that when marshal Richelieu had determined to storm a place in the Mediterranean, he gave out the following order—"any soldier who shall appear the least intoxicated, shall be excluded from the honor and glory of mounting the assault to morrow morning." Every man was at his post, and not a single instance of intoxication occurred. Such was the *esprit de corps* and the *amour propre* which prevailed in all ranks, that the dread of corporeal punishment had less effect than the being deprived of an opportunity to shew courage and resolution.

Vaisseau PRENEUR, *Fr.* A term

peculiarly applicable to a ship that has taken a prize.

PREPARATIFS *de guerre*, Fr. Warlike preparations. A French writer, under this article, very judiciously observes, that the necessary arrangements which must be made before an army takes the field, and sometimes before an open declaration of war takes place, ought to be managed with extreme caution and great secrecy; although it is impossible to prevent the neighboring powers from being totally ignorant of what is going forward. It is recorded that Henry the IVth of France, having conceived a vast military project, kept it a profound secret for several years, and made the necessary preparations with extreme caution, before he put it into execution.

When Louis the XIVth resolved to invade Italy, in 1663, he dispatched commissaries, purveyors, &c. the preceding year, under various pretences, to buy up corn, to secure forage for his cavalry, and to provide every thing that might be wanted in the train of artillery; and in 1667, when he formed the plan of entering Belgium in person, he arranged all matters relative to the interior government of France during his absence, examined into the state of the finances, filled his treasury with money, augmented, by insensible degrees, the different regiments of his army, and by means of these and other sage precautions, secured the conquest of his object. In fact, well digested plans and cautious arrangements previous to the execution of a military project, however apparently tedious, are the sure forerunners of a prompt and decisive victory. It was a maxim among the Romans, and it is still one among the Turks, *De faire de grosses et courtes guerres*. To make war upon a scale previously vast and heavy, that its issue may be ultimately short and effectual.

PREPARATIVE, having the power of preparing, qualifying, or fitting. This word is used in a military sense to give notice of any thing about to be done. Hence

PREPARATIVE. A beat of the drum by which officers are warned to step out of the ranks when the firings are to commence.

When the preparative is beat, for the firings, the officers in the front rank step out nimbly two paces from the vacancies between the divisions, platoons, companies, or sub-divisions, face to the left without word of command, and look right of companies, &c. When the preparative has ceased, they severally commence the firing. When the general is beat they fall back into the front rank.

To **PREPARE.** To take previous measures.

PREPARE *for action*. A word of command used in the artillery. *To battery*, is a command of the same import.

PREPARATORY, antecedently necessary; giving that knowlege in any art or science which is necessary to qualify individuals for a superior class or branch. Hence *preparatory* schools.

PREPARATORY *Academies*. The junior department of the British military college, is *preparatory* to the senior. The first elements of military science are taught in the former, and officers get qualified in the higher branches of the profession when they enter the latter.

PRESENCE *of mind*. Ready conception of expedients, producing promptitude of action under difficult and alarming circumstances.

There is a very remarkable instance of that species of presence of mind which gives a sudden turn to public opinion, and, as it were, electrifies the human mind. When a dangerous mutiny broke out among the Roman legions, on a proposed expedition against the Germans, Cæsar suddenly exclaimed, "Let the whole army return ignominiously home if it think proper, the tenth legion and myself will remain and combat for the republic." Having, as Plutarch observes, excited his troops to fresh ardor, he led them against the Germans; and being informed that the enemy had been warned by their soothsayers not to engage before the next moon, he took an immediate occasion to force them to battle, in which he as usual obtained victory. On a subsequent occasion this great man discover- a promptitude of conception and a presence of mind which have since been imitated on various occasions by a modern general, but have never been surpassed in ancient or modern history.

Having led his army against the Nervii, the most uncivilized, and the most fierce of all the nations bordering upon the Roman territory, he met a resistance, which as it was not expected, somewhat shook the firmness of his troops. The Nervii, by a sudden onset, at first routed his cavalry, but perceiving the danger to which his army was exposed, Cæsar himself snatched up a buckler, and forcing his way through his own men, he, with the assistance of his tenth legion, changed the fortune of the day, and cut the enemy almost entirely off. For, as Plutarch states, out of 60,000 soldiers, not above 500 survived the battle. The instances of presence of mind in modern wars are numerous, for several see Memoirs of Bonaparte's first campaign: and several subsequent occasions.

En **PRESENCE**, *Fr.* In sight.

All **PRESENT.** A term used when an officer takes his serjeant's report, and makes the necessary enquiry respecting the state of his troops or company.

To **PRESENT**, **PRESENTER**, *Fr.* This word is used in various senses. Those which are more immediately applicable to military usage are as follow:

To **PRESENT.** To offer openly. To

exhibit. To give in ceremony; as to present the colors.

To Present *arms.* To bring the firelock to a certain prescribed position, for the purpose of paying a military compliment. See Manual.

Presenter *les armes*, Fr. To present arms, to bring the firelock to any position that may be prescribed in military exercise. In the firings it signifies *make ready*, viz. *Presentez les armes*, make ready; *Joue*, aim; *feu*, fire. In the manual and other exercises of the piece, it corresponds with our term.

Presenter *la baïonette*, Fr. To charge bayonet.

PRESIDENCY. The seat of government, so distinguished in India. There are four presidencies, viz. Bombay, Calcutta, Fort St. David, and Madras.

PRESIDENT *of the United States.*

President *of the old congress.*

President *of a general or regimental court martial.* The officer, oldest in rank, who sits in conjunction with other officers, for the trial of military offences is so called. The court, consisting of an odd number of members, when their opinions are equal, the president has the casting vote.

PRESIDIAL, relating to a garrison or fortress.

PRESS-*money*, money given to the soldier when taken or pressed into the service: but as the entrance into the American army is a voluntary act, it is more properly called bounty or enlisting money.

PRESTATION *de serment*, Fr. The taking an oath.

PRET, *Fr.* The subsistence or daily pay which is given to soldiers. The French say,

Payer le Pret. To pay subsistence.

Recevoir le Pret. To receive subsistence.

Toucher le Pret. To touch subsistence or daily pay.

PRETENDER, one who pretends to any thing whether it be his own or the property of another.

PRETER, *Fr.* In military tactics, to expose, as

Preter *son flanc à l'ennemi.* To expose one's flank to the enemy; to march in so unguarded a manner, or to take up one's ground so disadvantageously as to stand in continual danger of being outflanked.

The French likewise say, figuratively,

Preter *le flanc.* To put one's self in the power of another.

PRETOR, (*Préteur*, Fr.) Among the Romans, the governor of a province, who had served the office of pretor, or chief minister of justice in ancient Rome. The provinces so governed were called pretorian.

PRETORIAN, (*Pretorien, ne*, Fr.) appertaining to pretor; as *Pretorian Band*, the general's guard among the ancient Romans.

PRETORIUM, (*Prétoire*, Fr.) The hall or court wherein the pretor lived and administered justice. It also denoted the tent of the Roman general, in which councils of war were held. The place where the pretorian guards were quartered or lodged, was likewise called pretorium.

PREVARICATION. According to the laws of England is, where a lawyer pleads booty, or acts by collusion, &c. It also denotes a secret abuse committed in the exercise of a public office, or of a commission given by a private person. The word is unknown in military phraseology, and is only explained in this place to stand as a land mark to the open ingenuous character of a soldier.

PREVOST, *Fr.* Provost.

Prevost *d'une armée*, Fr. Provost-marshal belonging to an army.

PRICES *of commissions.* See Regulations.

PRICKER. A light horseman was formerly so called.

To PRICK *out.* An expression used among engineers, &c. signifying to mark out the ground where a camp, &c. is to be formed.

To Prick *out the line of circumvallation.* This is done by the chief engineer and chief of the staff, whenever an army entrenches itself before a town, or takes possession of any given lot of ground, and begins to hut.

PRICKING. Among marines, to make a point on the plan or chart, near about where the ship then is, or is to be at such a time, in order to find the course they are to steer.

PRIEST's-*cap.* See Fortification and Bonnet.

PRIME, a word of command used in the platoon exercise. See Manual.

Prime *and load*, a word of command used in the exercise of a battalion, company, or squad. See Manual.

PRIME *parade*, in fencing, is formed by dropping the point of your sword to the right, bending your elbow, and drawing the back of your sword hand to within a foot of your forehead, in a line with your left temple, so that your blade shall carry the thrust of your antagonist clear of the inside or left of your position.

Prime *thrust*, a thrust applicable after forming the above parade, and delivered at the inside of the antagonist. To obtain an opening for this thrust, it is necessary to step out of the line to the right as you parry, or else to oppose the sword of your antagonist with your left hand. The first method is most eligible.

Prime *Hanging Guard*, with the broadsword, a position in which the hand is brought somewhat to the left, in order to secure that side of the face and body. See Broadsword.

PRIMING, in *Gunnery*, the train of powder that is laid, from the opening of the vent, along the gutter or channel, on the upper part of the breech of the gun, which, when fired, conveys the flame to the vent, by which it is further communicated to the charge, in order to discharge the piece. This operation is only used on ship-board, at the proof, and sometimes in garrison; for on all other occasions, tubes are used for that purpose.

Priming, *or prime of a gun*, is the gunpowder put in the pan or touch-hole of a piece, to give it fire thereby.

Priming-*case*, a small tin case, about the size and shape of a cartridge, for the purpose of keeping a certain quantity of gunpowder, for priming, constantly ready and dry. This rational and economical invention, should be universally adopted.

Priming *position*. See *Platoon exercise under* Manual.

Priming-*wire*, in *gunnery*, a sort of iron needle employed to penetrate the vent or touch-hole of a piece of ordnance, when it is loaded, in order to discover whether the powder contained therein is thoroughly dry, and fit for immediate service; as likewise to search the vent and penetrate the cartridge, when the guns are not loaded with loose powder.

PRIMIPILARII, PRIMOPILARII, *or* PRIMIPILARES, among the Romans were such as had formerly borne the office of primipulus of a legion. The banner was entrusted to his care. Among other privileges which the primipilarii enjoyed, they became heirs to what little property was left by the soldiers who died in the campaign.

Primipilaire, *Fr.* See Primipilarii.

PRIMIPULUS, the centurion belonging to the first cohort of a legion. He had charge of the Roman eagle.

PRIMITIVES, *Fr.* Primitive colors are distingushed by this term among the French. They are, the yellow, the red, and the blue; white and black being the extremes.

PRINCIPES, (*Princes*, Fr.) Roman soldiers. They consisted of the strongest and most active men in the infantry, and were armed like the Hastati, with this difference, that the former had half-pikes instead of whole ones.

PRINCIPLE, according to the schools, is that from which any thing is done or known.

Principle also denotes the foundations of arts and sciences.

Military Principles, the basis or ground work upon which every military movement is made, and by which every operation is conducted.

PRISAGE, that share which belongs to the king or admiral out of such merchandises, &c. as are lawfully taken at sea.

PRIS, *Fr.* This word is variously used by the French, in a figurative and proverbial sense. *C'est autant de pris sur l'ennemi.* An expression signifying that some advantage, at least, has been gained.

Une Ville prise, *Fr.* a town which has been taken.

Prise *des dehors d'une place*, Fr. The taking possession of an enemy's outworks.

PRISES, *Fr.* Prizes.

Prises *sur l'ennemi*, Fr. Every thing taken from the enemy is so called.

PRISONNERS *de guerre*, Fr. prisoners of war.

PRISONERS *of war*, those of the enemy who are taken in or after a battle, siege, &c. they are deprived of their liberty at large, until exchanged, or sent on parole.

PRIVILEGE, is any kind of right or advantage which is attached to a person or employment exclusive of others.

Privileges. Among the different privileges which prevail in the British army, the life guards receive their promotions direct from the king, without passing through the commander in chief as all other corps do. The appointment of colonel in the life guards gives the honorary title of gold stick, and the field officer of the day is the silver stick, through whom all reports, &c. are conveyed to the king. Although there is a lieutenant general of the London district, the foot guards have the privilege of reporting to head quarters direct. The foot guards enjoy the privilege of ranking, from the ensign, one step higher than the line. A lieutenant, for instance, ranks as captain, and can purchase as such into any marching regiment without having waited the regulated period; and a captain, having the brevet rank of lieutenant colonel, may leap over all the majors of the line, by getting appointed to a marching regiment. The promotions of the guards, *among themselves*, are, however, extremely slow; and the only indemnification they have must be at the expence of the line. This preposterous pre-eminence which is not founded on any military principles or personal merit, has tended to destroy military emulation in England; and will every where when merit only is not the criterion of honor and promotion.

Privileges *des régimens*, Fr. Certain privileges attached to regiments, which are always abused, when not the reward of distinguished merit.

PRIVY *Council*, a council of state held by a king, with his counsellors, to concert matters for the public service; also called the *cabinet*.

PRIX *des emplois ou charges militaires*, Fr. The price of commissions, or military employments. During the monarchy of France, a company in the French guards sold for 80,000 livres!

A company in the six first regiments of infantry, went for 75,000 livres. The six following, exclusive of the *régiment du roi*, went for 55,000 livres. One in the regiment of Poitou, and as far down as the Penthievre, 40,000 livres; in the Penthievre, and from that to the last regiment inclusive, 30,000 livres!

A company in the Scotch gendarmes cost 180,000 livres; in the Irish, the Bourguignon, and Flanders, 150,000 livres. The other companies of gendarmerie went for 135,000!

The sub-lieutenants in the gendarmerie paid 100,000 livres, and those in the light horse, 95,000 livres. The ensigns and first cornets, including the guidon belonging to the Scotch gendarmes, gave 62,000 livres!

The guidons, and second cornets, 30,000 livres! -

There was no specific regulation for the purchase of a regiment of heavy cavalry or dragoons. Appointments in the état major or staff belonging to the cavalry and the royal regiments *(les royaux)* sold for 100,000*l*. in the dragoons, from 100,000 to 120,000 livres.

The troops or companies in cavalry regiments, in the royal corps, and in the état major or staff, were fixed at 10,000 livres, and the rest at 8000.

A troop of dragoons sold for 7000 livres. No company or other appointment in the infantry, was allowed to be bought or sold. It will strike the military reader, that although the purchase of commissions was, in some degree, sanctioned by the old French government, it was nevertheless extremely limited, and confined to the upper ranks. The efficient part of the army, which is certainly the infantry, received its commissions gratis.

PRIZE-FIGHTER. See GLADIATOR.

PRIZE-*money*, officers and soldiers of the line doing duty on board ships of war, are entitled to prize-money as marines.

PROA, *Ind.* A sailing vessel is so called in India.

PROBABILITY, (*Probabilité*, Fr.) is nothing but the appearance of the agreement or disagreement of two ideas by the intervention of proofs, whose connection is not constant and immutable, or is not perceived to be so; but is, or appears for the most part to be so, and is sufficient to induce the mind to judge the proposition to be true or false, rather than the contrary.

PROBLEM, (*Problême*, Fr.) In the general acceptation of the term, a doubtful proposition, which will admit of several solutions.

PROCEDURES *militaries*, Fr. Military process. It consists in the investigation of all crimes and offences committed by soldiers which come under the cognizance of a military tribunal; in contradistinction to the authority which is vested in the civil magistrates.

To PROCLAIM, (*Proclamer*, Fr.) to promulgate or denounce by a solemn or legal publication. Hence, to proclaim peace, which is used in contradistinction to the term *to declare*, which denounces war. Both French and English say, *Declarer la guerre*, to declare war; *proclamer la paix*, to proclaim peace.

PROCLAMATION. An instrument which is published by the constituted authority of government, whereby the country at large is advertised of something, and whereby the people are sometimes required to do, or not to do certain things. A proclamation has all the efficacy of law, because it must be in concord with or founded upon the law already in being.

PROCLAMATION *of peace*, a declaration of the cessation of war.

PROCONSUL, among the Romans, a magistrate who was sent to govern a province with consular authority.

PRODITION. See TREACHERY.

PRODUCE, PRODUCT, (*Produit*, Fr.) Effect, fruit. In arithmetic it is the quantity which grows out of the multiplication of two or more numbers or lines one by another: 5 for instance multiplied by 4, will give the produce 20; and the produce of two lines, multiplied one by the other, is called the rectangle of these lines.

PROFILE, in drawing, side-ways or side-view. A picture in profile represents a head or face set side-ways.

PROFILER, *Fr.* the act of profiling, or designing with rule and compass.

PROFILE, (*Profil*; Fr.) in architecture, the draught of a building, fortification, &c. wherein are expressed the several heights, widths, and thicknesses, such as they would appear were the building cut down perpendicularly from the roof to the foundation. It serves to show those dimensions which cannot be represented in plans, but are yet necessary in the building of a fortification: they are best constructed on a scale of 30 feet to an inch. It is also called section, orthographical section, and by Vitruvius, sciagraphy. It is sometimes used in opposition to ichnography.

PROGRAM, a word derived from the Greek, signifying any public edict, notice, or declaration. The French make use of the word on occasions of national ceremony.

PROJECTILES, (*Programme*, Fr.) are such bodies as, being put in motion by any great force, are then cast off, or let go from the place where they received their quantity of motion; as a shell or shot from a piece of artillery, a stone thrown from a sling, or an arrow from a bow, &c. This line is commonly taken for a parabola, and the ranges are computed from the properties of the curves. The assumption would be just, in case the ball, in its motion, met with no resistance: but, the resistance of the air to swift motions being very great, the curve described by the shot is neither a parabola, nor near it; and by reason of the resistance, the angle which gives the greatest amplitude is not 45 degrees, as commonly supposed, but something less, probably 43 1-2. Hence the sublime mathematicia are absolutely necessary in the investigation of the track of a shell or shot in the air, known by the name of *military projectiles.*

Gallileo having discovered that bodies projected in vacuo, and in an oblique direction to the horizon, do always describe a parabola, he concluded that this doctrine was not sufficient to determine the real motion of a military projectile: for, since shells and shot move with a great velocity, the resistance of the air becomes so great with respect to the weight of the projectile, that its effect turns the body very considerably from the parabolic tract; so that all calculations, grounded on the nature of this curve, are of little use on these occasions. This is not to be wondered at, since Gallileo, in his enquiry, paid no regard to any other force acting on bodies, than the force of gravity only, without considering the resistance of the air.

Every body, moving in a fluid, suffers the action of two forces: the one is the force of gravity, or the weight of the body; and it is to be observed, that this weight is less than the natural weight of the body, that being diminished by an equal bulk of the fluid in which the body moves. The other force is that of the resistance, which is known to be proportional to the squares of the velocity of the body; and when the body is a globe, as is commonly supposed, the direction of this force is diametrically opposite to that of the motion of the body. This force changes continually, both in quantity and direction; but the first force remains constantly the same. Hence, the point in question is, to determine the curve which a body projected obliquely, must describe when acted upon by the two forces just now mentioned.

Although this question is easily reduced to a problem purely analytical, the great Newton, notwithstanding his ingenious endeavors, did not arrive at a complete solution of it. He was the first who attempted it, and having succeeded so well in the supposition, that the resistance is proportional to the velocity, it is almost inconceivable that he did not succeed, when the resistance is supposed proportional to the squares of the velocity, after solving a number of questions incomparably more difficult. The late Mr. John Bernoulli gave the first solution of this problem, from which he drew a construction of the curve, by means of the quadratures of some transcendent curves, whose description is not very difficult.

This great problem was, therefore, very well solved long ago; yet the solution, however good in theory, is such as has hitherto been of no use in practice, nor in correcting the false theory grounded on the parabola, to which the artillerist is still obliged to adhere, notwithstanding he knows it to be insufficient. It is certain, that that solution has been of no real advantage towards improving the art of gunnery: it has only served to convince the student in that art, of the error of his principles, drawn from the nature of the parabola, although he is still to abide by them. It is indeed something to know, that the common rules are erroneous; but unless we know how much they err in any case, the advantage is very little.

One may think it a work of infinite labor to establish rules for the flight of cannon shot, agreeable to the real curve which a body describes in the air: for although, according to the hypothesis of Gallileo, we want only the elevation of the piece, and the initial velocity, and it is therefore not difficult to calculate tables to show the greatest height of the projectile, and the point where it must fall in any proposed case; yet in order to calculate similar tables according to the true hypothesis, care must be taken, besides the two particulars already mentioned, to have respect as well to the diameter of the projectile as to its weight: therefore the practitioner will be reduced to the necessity of calculating tables, as well for the diameter of each projectile, as for its weight; and the execution of such a work would be almost impracticable. We therefore refer the curious to Mr. Euler's *True Principles of Gunnery*, translated, with many necessary explanations and remarks, by the very learned and ingenious Hugh Brown.

PROJECTION, (*Projection*, Fr.) in mathematics, the action of giving a projectile its motion. It is also used to signify a scheme, plan, or delineation.

PROJECT, *Fr.* a term generally used among French engineers, to express what works are required to be made for the inward or outward defence of a fortified town or place. It likewise signifies, in diplomacy, a plan or statement of terms and conditions which one country makes to another for a final adjustment of differences.

Contre-**PROJET,** *Fr.* a receipt or answer to terms proposed, accompanied by a project from the other side.

PROLONGE, *Fr.* A long thick rope, which is used to drag artillery; but different from the bricole and drag rope; it is coiled round pins under the gun carriage travelling, it is loosed in action, and one end being attached to the limber, is of great use in moving the gun in action or in a retreat. See *Am. Mil. Lib.*

PROMOTION, (*Promotion*, Fr.) This word signifies, in military matters, the elevation of an individual to some appointment of greater rank and trust than the one he holds.

PROMOUVOIR, *Fr.* to promote.

PROMU, *Fr.* promoted.

PROOF, in arithmetic, an operation whereby the truth and justness of a calculation are examined and ascertained.

PROOF *of artillery and small arms*, is a trial whether they will stand the quantity of powder allotted for that purpose.

The British government allow 11 bullets of lead in the pound for the proof of musquets, and 29 in two pounds, for service; 17 in the pound for the proof of carabines, and 20 for service; 28 in the pound for the proof of pistols, and 34 for service.

When guns of a new metal, or of lighter construction, are proved, then besides the common proof, they are fired 2 or 300 times, as quick as they can be, loaded with the common charge given in actual service. British light 6 pounders were fired 300 times in three hours, 27 minutes, loaded with 1lb. 4oz. without receiving any damage.

Proof *of ordnance.* All natures of ordnance undergo several kinds of proof before they are received into the British service; viz. 1st, they are guaged as to their several dimensions, internal and external, as to the justness of the position of the bore, the chamber, the vent, the trunnions, &c.

2d, They are fired with a regulated charge of powder and shot, and afterwards searched to discover irregularities or holes produced by the firing.

3d, By means of engines an endeavor is made to force water through them; and,

4th, They are examined internally, by means of light reflected from a mirror.

Iron guns. The guns are first examined as to their proper dimensions, in which, in no case more than 3-10 of an inch variation is allowed; and in the diameter of the bore only 1-30 from 42 to 18 pounders, and 1-40 from 12 to 4 pounders; but in the position of the bore 1-2 an inch out of the axis of a piece from a 42 to an 18 pounder, and 1-3 of an inch from a 12 to a 4 pounder is allowed. They are then fired twice with the charge in the following table, with one shot and two high junk wads; and examined with a searcher after each round. In this examination they must not have any hole or cavity in the bore of 2-10 of an inch in depth, behind the first reinforce ring, or 1-4 of an inch in depth before this ring.

Nature.	Proof charge.	Nature.	Proof charge.	Nature.	Proof charge.
Prs.	lbs. oz.	Prs.	lbs. oz.	Prs	lbs. oz.
42	25 —	12	12 —	3	3 —
32	21 8	9	9 —	2	2 —
24	18 —	6	6 —	1½	1 8
18	15 —	4	4 —	1	1 —

Iron guns are scaled with 1-12 the weight of the shot.

Brass guns. From 1 pounders to 12 pounders the diameter of the bore must not vary more than 1-40 of an inch, and in no dimensions more than 2-10. The following are the established charges for their proof. The heavy and medium guns with a charge equal to the weight of the shot, except the medium 12 pounder, which is proved with only 9lbs. The light guns with half the weight of the shot. The brass ordnance have not however been proved of late with such heavy charges, but with the following:

3 Prs. light, 3 times, with 1 lb. each round.
6 Prs. light, 3 times, with 2 lbs. each.
12 Prs. light, 2 times, with 4 lbs. each.
12 Prs. med 2 times, with 5 lbs. each.

Any hole ·15 of an inch deep upwards or sideways in the bore, or ·1 in the bottom, between the breach and first reinforce; or ·2 of an inch upwards or sideways, or ·15 in the bottom of the bore, before the first reinforce ring, will be sufficient to condemn them.

Brass Mortars and Howitzers. The exterior dimensions are in no respect to deviate more than 1-10 of an inch in an 8 inch howitzer, and 1-20 in the Cohorn mortars and howitzers. Their bores and chambers not to deviate from their true diameters or positions more than 1-40 of an inch.

The brass mortars and howitzers are fired twice with their chambers full of powder, and an iron shell. The mortars on their own beds, at about 75 degrees elevation; and the howitzers on their carriages, at about 12 degrees. Iron mortars are proved on their iron beds, with a charge equal to the full chamber, and an iron shot equal in diameter to the shell.

Cohorn mortars, having a hole ·1 of an inch in depth in the chamber, or ·15 in the chase, are rejected: royal howitzers the same. 8 inch howitzers having a hole ·15 of an inch in depth in the chamber, or ·2 in the chase, will be rejected.

Carronades. The diameter and position of their bore and chamber must not deviate 1-20 of an inch. They are proved with two rounds, with their chambers full of powder and 1 shot and 1 wad. A hole of 2-10 of an inch in depth in the bore, or 1-10 in the chamber condemns the piece.

Proof Charges.

68 Prs.	42	32	24	18	12
13 lbs.	9	8	6	4	3

All ordnance, after having undergone this proof, and the subsequent searching, are subject to the water proof: this is done by means of a forcing pump, having a pipe or hose fixed to the mouth of the piece: after two or three efforts to force the water through any honeycombs or flaws which may be in the bore, they are left to dry; and generally the next day examined by the reflected light from a mirror. If the bore contains any small holes or flaws which have not been discovered by the former proofs, they are very readily found by this; the water will continue to weep, or run from the holes, when the solid parts of the bore are perfectly dry. Ordnance suspected of being bad are often subject to a more severe proof: that of firing 30 rounds quick, with the service charge and 2 shot; and in doubtful cases, where the purity of the metal is suspected, recourse has been had to chemical trials and analysis. A quantity of clean filings taken from a part of an iron gun free from rust, are dissolved in diluted sulphuric acid, and the quantity of gas disengaged during the solution accurately ascertained. The plumbago which remains after solution is also separated by filtration, and carefully weighed. Now it is well known that the purer the iron, the greater the quantity of inflammable gas obtained, and the less the proportion of plumbago which remains after the solution; from these two parts therefore a tolerable judgment may be formed of the quality of the metal. When the plumbago exceeds 4 1-2 *per* cent. the iron will always be found deficient in strength; and there has been no instance of a gun bursting where the plumbago did not exceed 3 *per* cent; that is, where 100 grains of the metal did not leave more than 3 grains of plumbago. The color of the plumbago is also to be attended to; when it is brown or reddish, it is an indication of hard metal, and when in quantities and mixed with coals, there can be no doubt but that the iron is too soft for cannon.

Proof of Iron Shells. After the shells are guaged and examined as to their dimensions and weight, they must be well scraped out, and the iron pin at the bottom of the inside must be driven down or broken off. They are then to be hammered all over, to knock off the scales, and discover flaws, and no hole, in the large shells is allowed, of more than 3-4 of an inch deep. An empty fuze is then driven into the fuze hole, and the shell is suspended in a tub of water, in such manner that the shell be covered by the water, but that it does not run into the fuze: in this situation the nose of a pair of bellows is put in at the fuze hole, and several strong puffs given with the bellows; and if no bubbles rise in the water, the shell is concluded to be serviceable.

Ordnance condemned as unserviceable for any of the foregoing reasons, are marked as follows: ✕ D, or ✕ S, or ✕ W. The first signifies that they are found to be faulty in their dimensions, by Desagulier's instrument; the second, by the searcher; and the third, by the water proof.

PROOF *of powder*, is in order to try its goodness and strength. There have been different inventions proposed and put in practice heretofore, for the proof of powder. See GUNPOWDER and EPROUVETTE

PROOF *of cannon*, is made to ascertain their being well cast, their having no cavities in their metal, and, in a word, their being fit to resist the effort of their charge of powder. In making this proof, the piece is laid upon the ground, supported only by a piece of wood in the middle, of about five or six inches thick, to raise the muzzle a little; and then the piece is fired against a solid butt of earth.

Tools to PROVE *cannon are as follow,* viz. *Searcher*, an iron socket with branches, from four to eight in number, bending outward a little, with small points at their ends: to this socket is fixed a wooden handle, from eight to twelve feet long, and 1 1-2 inch in diameter. This searcher is introduced into the gun after each firing, and turned gently round to discover the cavities within: if any are found, they are marked on the outside with chalk; and then the *searcher with one point* is introduced, about which point a mixture of wax and tallow is put, to take the impression of the holes; and if any are found of 1-9th of an inch deep, or of any considerable length, the gun is rejected as unserviceable to government.

Reliever, an iron ring fixed to a handle, by means of a socket, so as to be at right angles: it serves to disengage the first searcher, when any of its points are retained in a hole, and cannot otherwise be got out. When guns are rejected by the proof masters, they order them to be marked ✕ which the contractors generally alter to *W P*, and after such alteration, dispose of them to foreign powers for Woolwich proof.

A most curious instrument for finding the principal defects in pieces of artillery, has been invented by lieutenant general Desaguliers, of the royal regiment of artillery. This instrument, grounded on the truest mechanical principles, is no sooner introduced into the hollow cylinder of the gun, than it discovers its defects, and more particularly that of the piece not being truly bored, which is a very important one, and to which most of the disasters happening to pieces of artillery, are in a great measure to be imputed; for, when a gun is not properly bored, the most expert artillerist will not be able to make a good shot.

PROOF *of mortars and howitzers*, is made to ascertain their being well cast, and of strength to resist the effort of their charge. For this purpose the mortar or howitzer is placed upon the ground, with some part of their trunnions or breech sunk below the surface, and resting on wooden billets, at an elevation of about 70 degrees.

The mirror is generally the only instrument to discover the defects in mortars and howitzers. In order to use it, the sun must shine; the breech must be placed towards the sun, and the glass over against the mouth of the piece: it illuminates the bore and chamber sufficiently to discover the flaws in it.

PROOF *armor*, armor hardened so as

to resist the force of an arrow, a sword or other weapons in use before the discovery of gunpowder.

Proof *charge*, the quantity of gunpowder which is used in trying the several pieces of ordnance.

PROPER, in military matters, stands as a reduplicative, serving to mark out a thing more expressly and formally, viz.

Proper *front of a battalion*. The usual continuity of line which is given to the formation of a battalion, and which remains unaltered by the countermarch or wheelings of its divisions; or if altered is restored by the same operation.

Proper *right*, the right of a battalion, company, or subdivision, when it is drawn up according to its natural formation.

Proper *pivot* flank in column, is that which, when wheeled up to, preserves the divisions of the line in the natural order, and to their proper front. The other may be called the *reverse* flank. In column, divisions cover and dress to the proper pivot flank; to the left when the right is in front; and to the right when the left is in front.

PROPLASM. See Mould.

PROPORTION, (*Proportion*, Fr.) The relation which parts have among themselves, and to the whole.

PROPOSER *une personne pour une charge*, Fr. To recommend a person for a situation.

PROPOSITION, (*Proposition*, Fr.) in geometry, the declaration of a truth which is proved by demonstration. Such are the propositions in Euclid's Elements. Propositions are divided into *Problems* and *Theorems*.

PROPREFECT, among the Romans, the prefect's lieutenant, whom he commissioned to do any part of his duty in his place.

PROPRETE *des soldats*, Fr. Cleanliness required in soldiers. See Serjeant.

PROPRETOR, the same in his relative capacity as proconsul among the Romans. He was a magistrate who, after having discharged the office of pretor at home, was sent into a province to act in the same capacity.

PROQUESTOR, among the Romans, the questor's lieutenant, who discharged his office in his stead.

To PROSECUTE, to carry on. Hence to prosecute the war.

PROSPECTIVE, appertaining to viewing.

PROSTYLE, any building having pillars in the front only.

PROTECTOR. This word sometimes denotes the regent of a kingdom. Oliver Cromwell assumed this title on the death of Charles I. of England; Bonaparte exercises the power of emperor over a great part of Germany, under the title of *Protector* of the confederation of the Rhine.

PROTESTANT, an appellation first given in Germany to all who adhered to the doctrine published by Luther.

PROVEDITOR, (*Provediteur*, Fr.) The Venetians had two appointments of this description before the revolution. One gave the supreme command of the armies on shore, the other that of the fleets.

Of these proveditors, there were three who had the direction of matters relating to policy throughout the signory.

Proveditor-*general of the sea*, an officer in Italy, whose authority extended over the fleet, when the captain-general was absent. He had particularly the disposal of the cash.

PROVET, an artillery machine used with howitzers. See Eprouvette.

PROVISIONS, are properly those articles of food and sustenance which soldiers receive from the public, and which in the British service are payed for by deductions from their pay. There is taken a deduction of *six pence a day* from the full pay of every serjeant, corporal, trumpeter, drummer, fifer, private man of the life guards, horse guards, dragoon guards, dragoons, foot guards, infantry of the line, militia, fencible infantry, and companies of invalids, when serving out of Great Britain, on stations at which provisions are supplied by the public; also when embarked in transports, or other vessels; (except while serving as marines, or during their passage to and from India at the expence of the East-India company;) also when prisoners of war, and maintained at the expence of Great Britain; and likewise when in general hospitals, either at home or abroad. A deduction of *three-pence halfpenny* is likewise to be made from the full pay of each serjeant, &c. when stationed in Jamacia, in New South Wales, at Gibraltar, (the loss by exchange at the latter place continuing as before) and while on their passage to and from India at the expence of the East-India company.

These deductions commenced, in regard to the troops in Europe, on the 25th of February, 1799; and in regard to the troops abroad, on the 25th of April, 1799.

Provisions. See Ration.

PROVISIONAL, (*Provisionel*, Fr.) Temporarily established.

PROVISIONALLY, (*Provisoirement*, Fr.) by way of provision, or temporary arrangement. This adverb is frequently used both in French and English to distinguish the exercise of temporary functions from that of permanent appointments.

PROVOST-*Marshal*, of an army, is an officer appointed to secure deserters, and all other criminals: he is often to go round the army, hinder the soldiers from pillaging, indict offenders, execute the sentence pronounced, and regulate the weights and measures used in the army when in the field. He is attended by a lieutenant's guard, has a clerk, and an executioner.

PROWESS, valor, bravery in the field, military gallantry.

PSILOI, light armed men among the Greeks, who fought with arrows and darts, or stones and slings, but were unfit for close fight. They were in honor and dignity inferior to the heavy armed. Next to these were the peltasti, a middle sort of foot soldiers between the hoplitai and the psiloi, being armed with spears, but far inferior in bigness to those of the heavy armed; their name is taken from their narrow shields, called *Peltæ*. Potter's Greek Antiquities, vol. II. chap. 3.

PUBLICANS, persons who keep alehouses, &c. for the accommodation of travellers. In England, troops upon the march, or in quarters, may be billeted on them.

PUCKA *fever*, Ind. a putrid fever. The bilious fever of tropical climates.

PUCKALLIES, *Ind.* leathern bags for carrying water. They are placed on the backs of oxen. The word is also used for water-carriers.

PUDLAYS, pieces of stuff to do the office of levers or hand spikes.

PUHUR *Din*, Ind. Watches kept in the day; of which there are four; a similar number is kept in the night, called *Puhurraat*.

PUISANT, *Fr.* a well built of dry stones, or made in a wall to serve as a reservoir for water.

PUISSANCE, *Fr.* in algebra and geometry, powers of lines and quantities.

PUISOIR, *Fr.* a copper vessel which is used in making saltpetre.

PUITS, *Fr.* A well.

PUITS *de mineur*, Fr. a perpendicular opening, about four feet square, which is made in the earth for miners to let themselves down, as deep as may be judged expedient, in order to push the subterraneous galleries beneath the covert way, or under any other works constructed by the besieged or besieger.

PULK, a tribe, a particular body of men. This word is chiefly used in Russia; as a *Pulk* of cossacks.

PULVERIN, *Fr.* priming powder.

PULVIS *fulminans*, the thundering powder, a mixture of three parts of saltpetre, two of tartar, and one of brimstone; all finely powdered. A small part, even a single dram of this being put into a shovel over a gentle fire, till it melts by degrees and changes color, will go off or explode as loud as a musquet. But it will not do any injury, because its force tends chiefly downward.

PULLEY, in *military mechanics*. See Mechanics.

PULWAR, *Ind.* a light boat for dispatches.

PUMICE-*stone*, a spongy, light crumbling stone which is cast out of mount Ætna, and other burning mountains. It is used in graving, polishing, &c.

PUMMEL. See Pommel.

PUMP, (*Pompe*, Fr.) a well known engine used in the elevation of water.

PUNCH, (*Poincon*, Fr.) an instrument for making holes. Every serjeant of a company, at least, and indeed every corporal of a squad, should be provided with a punch, as there is frequent occasion to fit on the cross belts, &c

PUNCTO. The point in fencing.

PUNISHMENT, in the *army*, in general, signifies the execution of a sentence pronounced by a court martial upon any delinquent. There are various methods in different countries which have been adopted for the punishment of officers and soldiers, without ultimately depriving the public of their services. Those in the British are simple, and in general very summary, especially with regard to officers. In some foreign services it is usual to send an officer from his regiment to do duty in a garrison town, during which period he loses all the advantages of promotion. Hence *être envoyer en garnison*, to be sent into garrison, implies a species of military chastisement. Perhaps the method which is adopted in the British navy, of putting an officer at the bottom of the list of his own rank, might be beneficial in the army. The barbarous and self-defeating punishment of whipping remains a disgrace to the British code, and we lament to say to the American also.

PUNITIONS *corporelles*, Fr. corporeal punishment. In the old French service, military punishments or chastisements, which were not of a capital nature, were of two kinds. The picket was for the cavalry, and the gauntelope, or passing through the rods, for the infantry. The rods, or baguetts, which properly means small sticks, or switches, were generally osier or willow twigs. Previous to the execution of the sentence, a corporal with two privates of the company, to which the culprit belonged, were sent to get the rods. These they brought in a bundle to the guard-house, or to any place of security which was near the spot where the punishment was to be inflicted. The criminal, under an escort of two serjeants and four grenadiers, with fixed bayonets, went for the bundle, and as he passed through the interval of the line which was faced inwards, each soldier drew out one twig. The grenadiers at the head of the line took off their slings, which they used instead of rods. When the culprit reached the end of the line, he undressed himself naked to the waist. The right and left openings of the double line faced inwards were closed by the grenadiers that had escorted the prisoner, viz. two with one serjeant at the head of the right, and two with ditto at the head of the left. It sometimes happened, that a serjeant or corporal marched backwards in ordinary time; keeping the point of his pike directed at the chest of the man who received the lashes. The culprit was, however, generally allowed to make the most of his legs. Whilst he was receiving his punishment, the drummers of the regiment, who were equally divided and stationed behind the grenadiers that had formed the escort, beat the charge. If a French soldier was convicted of theft, or any flagrant dishonorable practice that injured the military character, he not only underwent this punishment, but he was conducted in the most ignominious manner, to the outward gate of a frontier town; there expelled the country, and cautioned, never to be found within its limits under pain of suffering death. The nicety of military honor and reputation, among French soldiers, is proverbial. They never survive a blow, even among themselves, nor would a private soldier exist under the disgrace of having been struck by an officer.

When a girl of the town, or a notorious prostitute, was taken up, and ordered to be punished in a camp or garrison, she went through the same process; the drums beating the *marionnetes*, a sort of rogue's march, during the execution of the sentence.

In offering a Military Dictionary to the American public, the editor cannot withhold his protest against the barbarous method of whipping, as not only inconsistent with every maxim adapted to military institution, but incompatible with the republican institutions of America, as well as those of ancient Rome. The subjection to such odious punishment is a fatal blow to the American militia, and one of the greatest obstacles to its respectability and efficiency; since in service the punishments must necessarily be and ought to be uniformly the same. A man who has been once punished by whipping, as practised in the military service in England, must be totally lost to every sentiment of feeling reconcilable with military spirit, or that sense of honor which can never exist but where there is self-respect. There can be no confidence between officers that flog and men that are flogged, and thus the fundamental spirit of all military institution is undermined, that is confidence reciprocal and earnest through every grade. It is sometimes said that discipline cannot be enforced without it; all Europe conquered at this moment, by an army in which even blows are not permitted, is a melancholy lesson contrasted with the brutal discipline of the cane and other ignominious practices, in the armies of Prussia, Austria, Russia, and England. Those who cannot enforce discipline without treating their fellow men as brutes, should distrust their own faculties or fitness, and examine into their own false pride, their petulance, perhaps too often their unacquaintance with the first principle of military discipline, that is a knowlege of mankind, or of the human mind; the springs by which the human character is most easily and effectually led on to acts of voluntary heroism and intrepidity, are never produced by the lash; but always to be commanded by generosity, by a kindness that costs nothing, and which if it were to cost something, if one with discrimination, is always repaid ten thousand fold by the affection, the gratitude, the attachment, and the devotion of the soldier. It is said that there are men who are not to be overcome by generosity, nor subdued even by the lash; then such men should be held up as an example for better men; they should not be suffered to mess, nor to associate with men of better temper; the good men should be noticed and those neglected, and if these courses failed, the public service would be benefitted by their discharge, more than by their continuance.

PURCHASE. The sale and purchase of commissions is countenanced by government, and the prices of those commissions are regulated by authority, yet there are various ways through which young men of fortune and connexions get over the heads of veteran officers in the British army. In 1809, the detection of a system of purchase from the concubines of the British commander in chief excited astonishment.

Purchase and sale are terms unknown in the British navy.

PURSE, (with the grand signor,) a gift, or gratification of 500 crowns.

Purse *of money*, (in the Levant) about 112*l.* sterling. It is so called, because all the grand signor's money is kept in leather purses or bags of this value in the seraglio.

PURSEVANT, from the French *poursuivant*, a sort of serjeant at arms, who is ready to go upon any special occasion, or to carry any special mesage. His general office is to apprehend a person who has been guilty of an offence.

PURSUIT, the act of following with hostile intention.

PURVEYOR of Public Supplies, a civil officer whose duty it is to purchase what is required for public service, as military clothing, medicine, equipments; the troops of the United States have for a few years became worse clad than formerly, owing to the scandalous abuse of economy in the purveyor; and overlooked in the military department; a few years since no troops in the world were better provided for.

Purveyor, a person employed in the quarter-master or commissary general's department in the British service. Likewise one belonging to a military hospital, whose duty it is to provide food and necessaries for the sick.

To PUSH, to make a thrust.

To push *back*, to force an enemy to retreat.

A Push, a force impressed. As a push of the bayonet. This word is peculiarly applicable to the use that ought to be made of this formidable weapon.

PUSILLANIMOUS, cowardly, wanting spirit.

To PUT *a horse*, in horsemanship, signifies to break or manage him.

To PUT *a horse upon his haunches*, to force him to bend them in galloping in the manege, or upon a stop.

PUTTING-STONE, a great stone, which formerly was laid at the gate of a laird in Scotland, and by which he tried the bodily strength of each man in his clan.

PYKE, *Ind.* a person employed as a guard at night.

PYRAMID, (*Pyramide*, Fr.) This word is originally derived from the Greek, and takes its name from a resemblance to the spiral ascendancy of fire. It is the same as obelisk.

Geometrical PYRAMID, a solid standing on a square basis, and terminating at the top in a point; or a body whose base is a polygon, and whose sides are plain triangles, their several tops meeting together in one point.

PYRAMID, (in architecture,) a solid, massy edifice, which from a square, triangular, or other base, arises in gradual dimension to a vertex or point.

PYRAMIDAL *numbers*, (in arithmetic,) the sums of polygonal numbers, collected after the same manner as the polygon numbers themselves are extracted from arithmetical progression.

PYRAMIDAL, } Appertaining to, like
PYRAMIDICAL, } to a pyramid.

PYRAMIDOID, from the Greek, is what is sometimes called a parabolic spindle, and is a solid figure formed by the revolution of a parabola round its base, or greatest ordinate.

PYRAMIDS, of Egypt, are enormous piles of building, within three leagues of Grand Cairo, and are ranked among the seven wonders of the world.

The pyramids of Giza, the largest of which was originally built by Cheops, are supposed to have been erected about 14 years after the building of Solomon's temple, about 2665 years ago. The pyramids are known by various names, viz.

PYRAMIDS *of Giza*, (five in number) which are those already mentioned, and near which the French established a camp in 1799.

PYRAMIDS *of Saccara*, (three in number.) These stand in the plain of Mummies, and are about 600 feet high.

Dasbour PYRAMIDS, (six in number,) stand in the same plain, and appear somewhat lower. The French general Friant, in 1799, pursued Murad Bey across this plain, leaving the pyramids on his left.

The Southern, or Great PYRAMID. This pyramid has been called by Bruce, the traveller, the false pyramid. It stands in the plain of Mummies, and appears to be about 600 feet high.

PYRAMIDS, in ruins. Two pyramids of smaller size, which stand near the Fiume mountains, close to Joseph's canal.

Battle of the PYRAMIDS, so called from having taken place close to the large pyramids in the plain of Mummies, at Waardam, within a few miles of Grand Cairo. A previous engagement had been fought on the 15th of July, 1799, between the Mamalukes under Murad Bey, and the French army, commanded by Bonaparte in person. The second battle, called the battle of the pyramids, put the French in possession of lower Egypt. The following short extract from the Epitome of Military Events, may not be uninteresting.

"The French army, which during its last marches had suffered excessive fatigue, halted at Waardam, in order to recruit its strength, remount the artillery, and clean the musquets that were so subject to take rust from the moist vapors of the Nile. On the 21st of July, 1799, the second battle called the battle of the pyramids, was fought. General Desaix, with his advanced guard, at first made a corps of Mamalukes fall back; the order of battle of the other divisions was nearly the same as on the 13th, being drawn up by echellons of square columns, so as to flank themselves between each other; and the line of battle, which was itself flanked by two villages. Each division was concentraced into a compact body, and formed a square having its baggage in the centre, and the artillery in the intervals of the battalions. This formidable disposition presented a double fire in flank and in front, and opposed an invincible obstacle to the impetuous, but unconnected charges of Murad Bey's cavalry. To return to the action of the 21st, general Desaix's advanced guard, and Regnier's division, formed the right wing of the army, and were at first charged with the greatest impetuosity, by one half of the Mamaluke cavalry; the other half having remained to support the intrenchments of the village of *Embabé*.

"Notwithstanding this determination to anticipate the attack of the French columns, the rash valor of the Mamalukes again failed against those compact bodies, bristling with bayonets, and keeping up, within half musquet shot a most galling fire. While these charges were taking place against his right, and the Mamalukes were retreating in disorder, Bonaparte directing the two divisions of his centre against the intrenchments, ordered the village of *Embabé* to be turned by means of a ditch which masked this movement, and thus cut to pieces, or rather drove into the Nile, 1500 of the enemy's cavalry." In a map lately published by *Heather*, the number is stated to have been 2000. The attack, which was extremely warm, was conducted by general Marmont. Forty pieces of cannon, the camp of the Mamalukes, their rich spoils, together with upwards of 400 camels, fell into the hands of the conquerors. See pages 119 and 120, of the Epitome of Military Events.

In the year 1801, a large army of Turks with a detachment of the British forces in Egypt, defeated the French close to the pyramids, and took possession of Grand Cairo. This battle eventually decided the fate of Egypt.

PYROBOLY, the art of gunnery, &c.

PYROBOLIST, (*Pyroboliste*, Fr.) a maker of fire-balls, &c.

PYROETS, in horsemanship, are motions either of one tread or pist, or of two treads or pists.

PYROATS of one tread, or what the French call *de la tête à la queue*, from the head to the tail, are entire and very narrow turns made by a horse upon one tread, and almost at one time, so that his head is placed where his tail was, without putting out his haunches.

PYROETS of two pists, are turns of two treads upon a small compass of ground almost of the length of the horse.

PYROTECHNIE, *Fr.* See PYROTECHNY.

PYROTECHNY, in military matters, the doctrine of artificial fireworks, and firearms, teaching the structure and service, both of those used in war, for the attacking of fortifications, &c. as cannons, bombs, grenadoes, gunpowder, wildfire, &c. and those made for diversion, as serpents, St. Catherine's wheel, rockets, &c.

PYROTECHNIC, of or appertaining to pyrotechny.

Q

QUADRANGLE, } a square figure
QUADRANGULAR, } having four right angles.

QUADRANT, in *gunnery*, an instrument made of brass or wood, divided into degrees, and each degree into 10 parts, to lay guns or mortars to any angle of elevation.

The common sort is that whose radii project the quadrant about 12 inches, and whose plummet suspends in its centre, by means of a fine piece of silk; so that, when the long end is introduced into the piece, the plummet shows its elevation.

The best sort has a spiral level fixed to a brass radius; so that, when the long end is introduced into the piece, this radius is turned about its centre till it is level: then its end shews the angle of elevation, or the inclination from the horizon; whereas the first shows that angle from the vertical. See LEVEL.

QUADRAT, or *to quadrat a gun*, is to see it duly placed on its carriage, and that the wheels be of an equal height.

QUADRATE, a square, having four equal and parallel sides.

QUADRATICK *Equations*, are such as retain, on the unknown side, the square of the root, or the number sought.

QUADRATRICE, *Fr.* See QUADRANT.

QUADRATURE, *Fr.* Quadrature.

QUADRILATERAL, (*Quadrilatère*, Fr.) having four sides.

QUADRILLE, *Fr.* This word is pronounced *Cadrille* Small parties of horse, richly caparisoned, &c. which used formerly to ride, &c. in tournaments and at public festivals. The Quadrilles were distinguished from one another by the shape or color of the coats which the riders wore. This word is derived from the Italian *Quadriglia*, or *Squadriglia*, being a diminutive of *Squadra*, a company of soldiers drawn up in a square.

QUADRIVIAL, having four roads or ways, meeting in a point.

QUAI, *Fr.* See QUAY.

QUAICHE, or **CAICHE**, *Fr.* A decked vessel, a ketch.

QUAKER-GUNS. See PASSE VOLANS.

QUALIFICATION. That which makes any person or thing fit for any thing.

To **QUALIFY**. To fit for any thing. To give in the necessary qualifications for the exercising of a civil or military employment. In a general acceptation of the term, *to qualify* does not mean to give proofs of mental ability.

QUANTIEME, *Fr.* a term used among the French to signify, not only the day of the month, as *quel quantième du mois avons nous?* what is the day of the month? but likewise the numerical order in which an individual stands upon a muster-roll, &c. viz. *Le quantième êtes vous dans votre campagnie?* how do you rank in your company? or of what standing are you?

QUANTITY, the amount; bulk; weight; that property of any thing which may be increased or diminished.

QUARANTINE, (*Quarantaine*, Fr.) The time which persons, suspected of having any contagious disorder, are obliged to remain without mixing with the inhabitants of the seaport or town at which they arrive. It takes its name from *quarantaine*, the term of 40 days.

QUARRE, *Fr.* See SQUARE.

Batalion QUARRE *d'hommes*, Fr. A square battalion.

QUARREAUX, *Fr.* Darts or arrows which the bowmen anciently used, and which were so called from the iron at the end being square, with a sharp point.

QUARRELS, in a military sense, are disagreements between individuals of that serious nature, as to produce challenges, duels, &c. by the Articles of War, it is specified, that all officers, of what condition soever, have power to quell all quarrels, *frays*, and disorders, though the persons concerned should belong to another regiment, troop, or company, and either to order officers into arrest, or non-commissioned officers or soldiers to prison, until their proper superior officers shall be made acquainted therewith; and whosoever shall refuse to obey such officer (though of an inferior rank) or shall draw his sword upon him, shall be punished at the discretion of a general court martial.

QUARREL, } an arrow with a square
QUARRY, } head.

QUART, *Fr.* Quarter.

Quart *de Cercle*, Fr. A quadrant such as bombardiers use when they take the angles, and give what inclination they think necessary to a mortar.

Quart *de Conversion*, Fr. Quarter-wheeling, or quarter-facing. The terms are used in military evolutions.

Demi-Quart *de Conversion*, Fr. Half-quarter-wheel.

QUARTE, *Fr.* In fencing. See Carte.

QUARTER, in *war*, signifies the sparing of men's lives, and giving good treatment to a vanquished enemy. Hence, *to give quarter, to take quarter*, &c. *donner quartier*, Fr. *prendre quartier*, Fr.

To QUARTER UPON. To oblige persons to receive soldiers, &c. into their dwelling houses, and to provide for them.

QUARTERS. Military stations are so called; as head quarters, home quarters, regimental quarters, &c.

QUARTERS, at a *siege*, the encampment upon one of the most principal passages round a place besieged, to prevent relief and convoys.

Head Quarters *of an army*, the place where the commander in chief has his quarters. The quarters of generals of horse are, if possible, in villages behind the right and left wings; and the generals of foot are often in the same place: but the commander in chief should be near the centre of the army.

Quarters *of refreshment*, the place or places where troops that have been much harrassed are put to recover themselves, during some part of the campaign.

Quarter *of assembly*, the place where the troops meet to march from in a body, and is the same as the place of rendezvous.

Intrenched Quarters, a place fortified with a ditch and parapet to secure a body of troops.

Winter Quarters, sometimes means the space of time included between leaving the camp and taking the field; but more properly the places where the troops are quartered during the winter.

The first business, after the army is in *winter quarters*, is to form the chain of troops to cover the quarters well: which is done either behind a river, under cover of a range of strong posts, or under the protection of fortified towns. Hussars are very useful on this service.

It should be observed, as an invariable maxim, in *winter quarters*, that your regiments be disposed in brigades, to be always under the eye of a general officer; and, if possible, let the regiments be so distributed, as to be each under the command of its own chief.

In Quarters. Within the limits prescribed.

Out of Quarters. Beyond the limits prescribed. Officers, non-commissioned officers and soldiers who sleep out of quarters, without leave, are liable to be tried by a general or regimental court martial, according to the rank they severally hold.

Quarter-*master*, is an officer, whose principal business is to look after the quarters of the soldiers, their clothing, bread, ammunition, firing, &c. Every regiment of foot, and artillery, has a quarter-master, and every troop of horse one.

Quarter-*master-general*, is a considerable officer in the British army, and should be a man of great judgment and experience, and well skilled in geography: his duty is to mark the marches, and encampments of an army: he should know the country perfectly well, with its rivers, plains, marshes, woods, mountains, defiles, passages, &c. even to the smallest brook. Prior to a march he receives the orders and route from the commanding general, and appoints a place for the quarter-masters of the army to meet him next morning, with whom he marches to the next camp, where after having viewed the ground, he marks out to the regimental quarter-masters the space allowed each regiment for their camp: he chuses the head quarters, and appoints the villages for the generals of the army's quarters: he appoints a proper place for the encampment of the train of artillery: he conducts foraging parties, as likewise the troops to cover them against assaults, and has a share in regulating the winter quarters and cantonments.

Quarter *staff*, an old military weapon, made of strong even wood, bigger and heavier than a pike: it is 6 1-2 feet long between the ferrules that keep fast the two pikes of iron stuck into the ends of the staff

Quarter, in the *manége*, as to work from quarter to quarter, is to ride a horse three times in upon the first of the four lines of a square; then, changing your hand, to ride him three times upon the second; and so to the third and fourth; always changing hands, and observing the same order.

Quarter-*facing*, is in the new discipline substituted for the old aukward *oblique marching*; it is also called the *line of science*; in ranks *every man* turns to the right or left as ordered, and if ordered to march, the lines or ranks thus keep parallel to their former front, but march on a line oblique to it.

QUARTER-*Wheeling*, in the old discipline, was the motion by which the front of a body of men was turned round to where the flank stood, by taking a quarter of a circle; but in the new discipline which reduces all principles to the strictest simplicity, the wheelings take all their proportions from *half a circle;* and for obvious causes, since the wheeling of any number of men on a whole circle, would be only moving them to bring them into the place in which they stood before they were wheeled or moved; now the purpose of wheeling is to change from one position to some other required position, and hence *quarter wheeling* means a quarter wheel of half a circle; thus wheeling *about*, is changing the front to the rear; and this wheeling is simply half the half circle, or placing the ranks on the same line from which they were moved; the quarter wheel is a movement of 1-4 of the half circle, or in a line oblique to the line from which they were moved; a regiment quarter wheeled by companies display the regiment in echellon.

QUARTERING *troops*, is to provide them with quarters.

QUARTERON, *one*, Fr. A quarteron; one born of a white man and a mulatto woman, or of a mulatto man and a white woman.

QUARTIER, *Fr*. For its general acceptation see QUARTERS.

QUARTIER *d'un Siége*, Fr. A station taken, or an encampment made in one of the leading avenues to a besieging town or place. When the *Quartier d'un Siége* was commanded by a general officer, during the French monarchy, it was called *Quartier du Roi*. The king's quarters.

QUARTIER *des Vivres*, Fr. The park of stores, provisions, &c.

QUARTIER *d'Hiver*, Fr. Winter quarters. Count de Turpin has written largely upon this subject. See *Essai sur l'Art de la Guerre;* likewise, *Suite de la Science de la Guerre*, tom. iv. p. 170.

QUARTIER *de Rafraîchissemens*, Fr. Those places are so called in which troops are permitted to halt and take up their quarters for any period, during a campaign.

QUARTIER *de Fourrage*, Fr. Foraging quarters. When the active operations of a campaign are necessarily interrupted by the inclemency of the season, means are adopted to lessen the heavy expences of winter quarters, by remaining a certain time in foraging quarters. A wise general will take care to live as long as he can upon his enemy's country, in order to draw as little as possible from his own.

QUARTIER *du Roi*, ou *du Général*, Fr. Head quarters, or the spot where the king or the commander in chief resides. When an army takes up its ground in low marshy places, &c. the royal or head quarters are marked out in the most advantageous manner, so as to have the king's or general's person secure. When an army went into action or stood in battle array, it was customary, among the French, to say, *Le Quartier du Roi est partout.* The king's station is every where. Nevertheless, it was always judged prudent, not to expose the royal person or the commander in chief too much. On this principle, head quarters were always established in a place which was surrounded by the best troops, and was supported by epaulements on the right and left, with the addition of a rear guard. Since the revolution, these arrangements have been much changed. It cannot, however, be uninteresting to give a general outline of what was practised during the monarchy. The *Quartier du Roi* or head quarters, when a town was besieged, were always fixed out of the reach of ordnance, and in a village that was well secured by entrenchments. Before the cannonade commenced, it was usual for the besieged to ascertain the exact station of head quarters, that their fire might not be directed towards them; nor did the real assault of the town take place from that direction. Wherever the king, or, in his absence, the commander in chief took up his quarters, the camp assumed its name from that particular spot or village.

QUARTIER *général de la tranchee*, Fr. Head quarters or principal station of the trenches. That spot is so called in which the commanding officer of the trenches takes post, and to which all reports of progress, &c. are, from time to time, conveyed. When the seige is somewhat advanced, it is usual to fix this quarters, near the outlet of the last parallel which leads to the head of the saps, in the principal line of attack.

QUARTIER *d'Assemblee*, Fr. The ground on which troops assemble to commence their military routes, or to be otherwise prepared for active operations.

Un QUARTIER *bien Retranche*, Fr. A quarter that is well entrenched.

Un QUARTIER *Enleve*, Fr. Quarters taken possession of by force.

Officiers de QUARTIER, *Fr*. Officers who were upon duty for three months, or during the space of one quarter of a year. This term was used in the old French service, to distinguish such officers from those who did duty throughout the year.

Etre de QUARTIER, *Fr*. To be upon duty for three months.

QUARTIER *Generaux*, Fr. General head quarters.

QUARTIER-*Maitre*, Fr. Quarter-master. This term, with respect to foreign troops, corresponds with *maréchal des logis* in a French infantry corps.

QUARTIER-*Mestre General*, Fr. Quarter-master-general. Among other armies the same as *maréchal général des Logis* in the old French service. There is a quarter-master-general in the Turkish service, whose immediate duty is to mark out the ground of encampment, the instant he has received orders to that purpose from the grand vizir, or, in his absence, from the seraskier, who is the general in ordinary, and who is always with the army, whether the grand vizir be present or not.

QUATRE, *Fr.* Four.

To QUELL. To crush, to subdue. Military force is sometimes resorted to by the civil magistracy to quell riots, &c. In England, the riot act must be read by a justice of the peace, and if the rioters or insurgents do not disperse, the magistrate may order the officer to do his duty, by firing, &c. upon them. When military law has been proclaimed, there is not any necessity for this preliminary caution.

QUERELLES, *Fr.* quarrels, feuds, &c.

QUERELLE *d'Allemand*, Fr. An expression used among the French, to signify a drunken quarrel.

QUERRY. See EQUERRY.

QUEUE. From the French, which signifies tail; an appendage that every British soldier is directed to wear in lieu of a club. Regimental tails were ordered to be nine inches long.

QUEUE D'ARONDE, a corruption of *Queue d'Yronde.* It signifies a piece of wood which is so made that it resembles at each end a swallow's tail.

QUEUE *d'Yronde, ou d'Yrondelle*, Fr. See SWALLOW'S TAIL.

QUEUE *du Camp*, Fr Literally means the tail or extremity of the camp. It is the line which is drawn in the rear of the camp, and which is directly opposite to the one in front, called the head of the camp.

QUEUE *de Paon*, Fr. Literally means a peacock's tail. It is used in architecture, to signify the different compartments or spaces which, in a circular figure, spread gradually from the centre to the circumference.

QUEUE *à Queue*, Fr. one after another.

Etre à la QUEUE, *Fr.* To be behind, or in the rear.

Avoir l'ennemi en QUEUE, *Fr.* To have the enemy close at your heels.

To go in QUEST *of an enemy.* To send out vedettes, patroles, &c. for the purpose of ascertaining an enemy's motions.

QUIBERON, *or Quibron.* A small peninsula of France, in Bretagne, in the bishoprick of Vannes, and to the north of Belleisle; as also a small island called the point of Quiberon, separated from the peninsula by a channel, and the sea next it is called the bay of Quiberon. This spot has been rendered remarkable by the expedition which took place in June, 1795 Upwards of 3000 regular troops (composed mostly of French emigrants that had served abroad, with the ill judged addition of some French prisoners, taken out of English gaols) were landed upon the coast. This force was intended as a co-operation with the insurgents of La Vendee, and was afterwards to have been increased by the descent of an English army, under the command of the earl of Moira; who had, indeed, already been instructed to detach a covering body for that purpose; but the British did not land, having been driven from the French coast by stress of weather. The French emigrants were all sacrificed.

QUICK, with celerity. It forms the cautionary part of a word of command when troops are ordered to move in quick time; as quick—march.

QUICK-*Step*, or *Quick-Time*, is 100 steps of 24 inches each, or 200 feet in a minute, and is the step used in all marchings but guard marching and reviews, when the slow march may be used.

QUICKEST-*Step*, or *Quickest-Time*, is 120 steps of 24 inches each, or 240 feet in a minute. In this step, all wheelings are performed, as also the doublings up of divisions, and their increase or diminution in front.

QUICK-*match*, in *laboratory works.* See LABORATORY.

QUIETISM. Apathy. Indifference.

QUIETISME, *Fr.* The state of those persons who did not take an active part in the French revolution.

QUIETISTE, *Fr.* A man who did not meddle with the revolution.

QUILTING *grape-shot*, in *gunnery.* See LABORATORY, and TO MAKE GRAPE-SHOT.

QUINQUANGULAR. Having five corners or angles.

QUINTAIN, QUINTIN, } An instrument used in the ancient practice of tilting. It consisted of an upright post, on the top of which a cross post turned upon a pivot; at one end of the cross-post was a broad board, and at the other a bag of sand The practice was to ride against the board with a lance, and at such speed, as to pass by before the sand-bag could strike the tilter on the back.

QUINTAL, *Fr.* one hundred weight. The *Quintal* varies in different places, according as the pound consists of more or fewer ounces. The English *Quintal* is 112 pounds, and is divided into quarters.

QUINTE, *Fr.* a low thrust in fencing, delivered at the outside of the position, with the nails turned up, as in low carte. When this thrust is forced over the blade from the guard in carte, it is termed flanconade.

QUINTUPLE. Five fold.

QUIRITES. In ancient Rome, the common citizens were so called, as distinguished from the soldiery.

To QUIT, to leave, to abandon. This word is variously used in military phraseology, viz.

To QUIT *your post*, *To* QUIT *your ranks*, } To retire, without having received any previous order for that purpose, from a station entrusted to your care. Any officer or soldier, who, during the heat of an engagement, shall quit his ranks, may be shot, or otherwise dispatched upon the spot. A sentry who quits his post before he is regularly relieved, is ordered to suffer death, or such other punishment as may be inflicted by a general court-martial.

Quit *your arms*. A word of command which was formerly given in infantry regiments, but is now laid aside.

QUITTANCE, *Fr.* receipt, acquittance.

Quittance *de finance*, Fr. A term formerly used among the French, to express any sum paid into the king's treasury, for an appointment or place.

QUITTER, *Fr.* to quit.

Quitter *l'epée*, Fr. Figuratively to leave the profession of arms.

QUIVER. A case for arrows.

QUI *vive?* } Fr. Who comes there?
Qui *va là?* } terms used by the French
Qui *est là?* } sentries when they challenge.

Etre sur le Qui *vive*, Fr. To be upon the alert.

QUILLON, *Fr.* the cross-bar of the hilt of a sword.

A QUIZ. This cant word is frequently used as a substantive to describe a strange, out of the way character. It is a term of ridicule.

To Quiz. A cant word much in use among fashionable bucks or blades, as certain creatures are called. It signifies to turn another into ridicule, by some allusion to his dress or manners, some ironical word or quaint expression In other terms, to take unwarrantable liberties with the natural defects, or harmless habits of unoffending individuals. This absurd and childish practice, (which grows out of ignorance, is supported by privileged assumption, and ought to be discouraged by every sensible man) has sometimes found its way into the British army. We need scarcely add, that it has frequently been the cause of the most serious quarrels, and is always contrary to good order and discipline. Commanding officers should, on all occasions, exert their authority, whenever there appears the least tendency to this unmanly, unofficer like, and ungentleman like custom. It ought constantly to be remembered, that the influence of evil is much stronger upon the commonality of mankind, than that of good. If an officer suffer himself to be quizzed by a brother officer, he will, by degrees, become ridiculous to the soldiers; and if he resent it, as he ought to do in *primo limine*, by a manly explanation with the weak fool who attempts to be witty, without possessing one spark of real wit, it is more than probable, that much ill blood will be engendered between them. The British Articles of War have, in some degree, provided against this evil. It is there specifically stated, that no officer, non-commissioned officer, or soldier, shall use any reproachful or provoking speeches or gestures to another, upon pain, if an officer, of being put in arrest (or if a non-commissioned officer, or a soldier, of being imprisoned) and of asking pardon of the party offended, in the presence of his commanding officer.

A QUIZZER A creature, who without possessing any real wit or humor, affects to turn others into ridicule, by an insolent affectation of the talent. The *thing* is generally found among those calling themselves fashionable young men, which, (to use a very apposite expression) has more money than wit, plumes itself upon wealth or connexion, and endeavors to make up by noise, turbulence, and privileged contradiction, what it wants in real knowlege and solid understanding. It is sometimes seen at a military mess, and about the purlieus of taverns and gaming tables.

QUOIL, in *gunnery*, a rope laid round in a ring, one turn over another.

QUOINS, in architecture, denote the corners of brick or stone walls.

QUOIN, (*Coin*, Fr.) a wedge used to lay under the breech of a gun, to raise or depress the metal.

QUOIT, the ancient discus—an olympic game, still practised in all parts of the world. It consists in throwing a large *iron ring* to a considerable distance, at a wooden peg, driven into the ground.

QUOTIENT. In arithmetic, the number resulting from the division of a greater number by a smaller, and which shews how often the smaller, or the divisor, is contained in the greater or dividend.

R.

RABINET, formerly a name given to a small sort of ordnance between a falconet and a base, about one inch and a half diameter in the bore, five feet six inches long, and 300 pounds in weight, loaded with six ounces of powder, and carrying a shot one inch and three-eighths in diameter.

RACHAT *du pain*, Fr. a certain pecuniary allowance which was made in the old French service to the officers of each company, for the surplus rations of ammunition bread that were left in the purveyor's hands. The same rule exists in the British service, when troops are in camp or barracks.

RACINE, *Fr.* See Root.

RACLOIR, *Fr.* A scraper. It is used in the artillery to cleanse out mortars.

RACOLER, *Fr.* To entice men to inlist.

RACOLEUR, *Fr.* a crimp, a bringer of recruits, one who entices others to inlist. Men of this description are to be found in all countries where military establishments prevail.

RACORDEMENT, *Fr.* This word is derived from *racorder*, which, in French architecture, signifies to join two pieces of building on one surface, or to unite an old building with a new one.

RADE, *Fr.* Road for ships to ride in.

RADEAUX, *Fr.* Rafters. They are frequently used in sieges, for the purpose of crossing ditches, &c. Chevalier Folard enters largely into the nature of these rafters, particularly in his 4th volume, page 67.

RADIOMETER, (*Radiomètre*, Fr.) This instrument is sometimes called Jacob's staff, *bâton de Jacob.* It is used by some to take the sun's altitude, and by others to ascertain elevations at sea.

RADIUS, the semi-diameter of a circle. In fortification, the radius is distinguished into *exterior*, *interior*, *oblique*, and *right radius*. The three former are noticed each under its initial letter. The latter is a perpendicular line drawn from the centre of a polygon to the exterior side.

RAFFINAGE, *Fr.* a term used by the French to express the operation through which saltpetre passes after it has been boiled once. The literal meaning is *refining;* the act of cleansing any thing from recrementitious matter.

RAFFINER, *Fr.* To refine.

RAFFINOIR, *Fr.* a wooden cask, or copper vessel, in which saltpetre is deposited after it has been boiled once. It usually remains thirty minutes, after which it is let out through a cock fixed for that purpose at the bottom of the vessel.

RAFRAICHISSEMENS, *Fr.* Provisions. See QUARTIER.

RAFRAICHIR, *Fr.* To cool; to spunge; as *rafraichir le canon;* to spunge a cannon.

RAFRAICHIR *une place*, Fr. to succor a place by sending in fresh troops and provisions.

RAFRAICHIR *des troupes*, Fr. to allow troops to repose; likewise to supply them with fresh provisions.

RAFTS, a kind of frames or floats made by laying pieces of timber together, or across each other, to serve as bridges for troops to pass over rivers.

RAFTERS, are pieces of timber, which, standing by pairs on the transom, wall plate, or raising piece, meet in an angle at the top, and form the roof of a building.

It is a rule in building, that no rafters should stand farther than 12 inches from one another: and as to their sizes and scantlings, that principal rafters, from 12 feet 6 inches to 14 feet 6 inches long, be 5 inches broad at the top, and 8 at the bottom, and 6 inches thick: those from 14 feet 6 inches, to 18 feet 6 inches long, be 9 inches broad at the foot, 7 inches e top, and 7 inches thick: and those from 18 feet 6 inches, to 21 feet 6 inches, to be 10 inches broad at the foot, 8 at the top, and 8 thick. Single rafters, 8 feet in length, must have 4 1-2 inches, and 3 3-4 in their square. Those of 9 feet long, must be 5, and 4 inches square.

RAJPUTES, *or* RAUJPOOTS, *Ind.* The second tribe of the four great classes of Hindus; the priests or *Bramins* are the first. Both classes may be soldiers, and none but members of one or other of these classes can be kings or princes. Rauj means great, and poot means arms, that is great in arms; they are the descendants of the military tribe of Hindus.

RAJAH, *Ind.* This word means an authority equivalent to that of a king. The Rajahs became generally tributary to the Mogul, but were suffered to follow their own modes of government.

RAIE, *Fr.* properly means a seam, furrow, streak.

RAINURE, *Fr.* a grove.

RAIS, *Fr.* a spoke of a wheel.

To RAISE *Troops*. See LEVY.

To RAISE *a plan of a fortress*, is to measure with cords and geometrical instruments, the length of the lines, and the capacity of the angles, that by knowing the length, breadth, and thickness, of all the different parts of a fortification, it may be represented upon paper, so as to find out its advantages and disadvantages.

RAISON, *Fr.* this word is used by the French, in a mathematical sense, to express the relation which one number has to another, and in general, that which exists between one quantity and another. The term is distinguished into *raison arithmétique*, or arithmetical reasoning; and *raison géométrique*, or geometrical reasoning. French carpenters likewise use the term, to shew that pieces of wood, &c. are properly laid, viz. *Des pieces de bois en leur raison.*

RALLIEMENT, *Fr.* Rallying point. It is sometimes written *raliment.*

Mot de RALLIEMENT, *Fr.* a word or countersign, which is given to out posts, and to sentries that are stationed beyond the lines.

RALLUMER, *Fr.* To light up again, to rekindle, to renew.

RALLY, one of the bugle horn soundings.

To RALLY, (*Rallier*, Fr.) To bring troops back to order that have been dispersed.

RALLYING, in *war*, re-establishing, or forming together again, troops broken and put to flight.

To RAM, to drive with violence, as with a battering ram.

To RAM *down*, to force any thing downwards, or to fill with any thing driven hard together, as in the charge of firearms.

RAM *down cartridge*, a word of command used in the platoon exercise. See MANUAL.

Battering RAM, in *antiquity*, a military engine used to batter and beat down the walls of places besieged.

The battering ram was of two sorts, the one rude and plain, the other compound. The former seems to have been no more than a great beam, which the soldiers bore on their arms and shoulders, and with one end of it, by main force, assailed the walls. The compound ram is thus described by Josephus: it is a vast beam, like the mast of a ship, strengthened at one end with a head of iron, something resembling that of a ram, whence it took its name. This was hung by the middle with ropes to another beam, which lay across two posts, and hanging thus equally balanced, it was by a great number of men drawn backwards and pushed forwards, striking the wall with its iron head.

Plutarch informs us, that Mark Antony, in the Parthian war, made use of a ram 80 feet long: and Vitruvius tells us, that they were sometimes 106, and 120 feet long: to this perhaps the force and strength of the engine was in a great measure owing. The ram at one time was managed by a whole century of soldiers; and they, being exhausted, were seconded by another century; so that it played continually, and without any intermission.

The momentum of a battering ram 28 inches in diameter, 180 feet long, with a head of cast iron of one ton and a half, the whole ram with its iron hoops, &c. weighing 41,112 pounds, and moving by the united strength of 1000 men, will be only equal to that of a ball of 36 pounds, when shot point blank from a cannon.

RAMMER, an instrument used for driving down stones or piles into the ground in military works; or for beating the earth, in order to render it more solid for a foundation.

Rammer, *or* Ramrod *of a gun*, the ramrod or gunstick; a rod used in charging a gun, to drive home the powder and shot, as also the wad, which keeps the shot from rolling out. The rammer of a piece of artillery, is a cylinder of wood, whose diameter and length are each equal to the diameter of the shot, with a handle fixed to it, at the end of which is another cylinder, covered with lamb-skin, so as to fit the gun exactly, and called a sponge: it is used to clean the piece before and after it is fired. The ramrod of a musquet is one entire piece of iron.

Return RAMROD. See Platoon Exercise, *under* Manual.

RAMPART, in *fortification*, or, as some call it, but improperly, *rampire*; the great massy bank of earth raised about a place to resist the enemy's shot, and to cover the buildings, &c. On it is raised a parapet towards the country. It is not above 18 feet high, and about 60 or 70 thick, unless more earth be taken out of the ditch than can be otherwise disposed of. The rampart should be sloped on both sides, and be broad enough to allow the marching of waggons and cannon, besides the parapet which is raised on it. The rampart of the half moons is better for being low, that the small arms of the besieged may the better reach the bottom of the ditch; but it must be so high, as not to be commanded by the covert-way. The rampart is encompassed with a ditch, and is sometimes lined with a fausse-bray and a berme.

RAMPS, (*Rampes*, Fr.) in *fortification*, are sloping communications, or ways of very gentle ascent, leading from the inward area, or lower part of a work, to the rampart or higher part of it.

RAMS-*horns*, in *fortification*, are a kind of low works made in the ditch, of a circular arc; they were invented by M. Belidor, and serve instead of tenailles.

RAMADAN, *Fr.* a month so called among the Turks, during which period they observe fast days

RAMASSE, *Fr.* a sort of sledge, in which travellers are conveyed from the tops of mountains that are covered with snow.

RAMASSER, *Fr.* to collect, to get together. *On a ramassé tout ce qu'on a pu trouver de soldats.* They got as many soldiers together as they could.

RAMASSE, *Fr.* Gathered together, collected. This word is likewise used to distinguish men that are hastily raised and embodied, from soldiers who have been regularly disciplined, viz. *Ce ne son pas des troupes reglées, ce sont des gens ramassés.* They are not regular troops, but persons hastily got together.

Ramasse, *Fr.* strong, vigorous. *Un homme ramasse.* A strong athletic man. *Ramasse*, in this sense, agrees with the English word tight-built, thickset, &c.

RAMAZAN. See Ramadan.

RAMBERGE, *Fr.* an advice boat.

RAME, *Fr.* an oar. It is likewise called *Aviron*.

Balle Ramee, *Fr.* Cross-bar shot.

RAMEAUX *de la mine*, Fr. Branches belonging to a mine. See Gallery.

RAMPE *au Pente extrêment douce qu'ont fait le long des talus des ramparts*, Fr. a slope, or declivity which is extremely gradual along the talus of ramparts. These slopes contain two toises in breadth, and are cut upon the interior talus. They are made, according to circumstances and the exigencies of the place, sometimes within the angle of the rampart, opposite to the entrance into the bastion, when the latter is full; sometimes along the flanks, or at the flanked angle when the bastion is empty. Pieces of ordnance, ammunition, &c. are conveyed up these slopes to the embrazures of the ramparts.

RANCHER, *Fr.* a sort of ladder which is made of wooden pegs, and is used on various occasions.

RANÇON, *Fr.* Ransom. It was

likewise the name of an old French weapon, consisting of a long stake with a sharp iron point at the end, and two blades or wings bent backwards, and extremely keen.

RANCONNER, *Fr.* to ransom.

RANDOM *shot*, in *artillery*, when the piece is elevated at an angle of 45 degrees upon a level plane. See RANGE.

RANG, *Fr.* Rank.

RANG *d'un escadron* ou *d'un bataillon*, Fr. Rank in a squadron of horse, or battalion of infantry. Any straight line which is formed by soldiers standing by the side of each other, is so called.

Doubler les RANGS, *Fr.* to form from rank entire, or to throw one rank into two, and thereby encrease the depth of any given number of men, by diminishing their front. Hence to *double up*, or diminish the front of any leading line.

RANG, *Fr.* the relative rank which is observed in military corps with regard to precedence, tour of duty, &c. In some instances *rang et grade* mean the same thing.

De RANG, *Fr.* abreast, side by side.

Paroitre sur les RANGS, *Fr.* to enter the list.

Etre sur les RANGS, to be numbered amongst any particular set of men.

Mettre au RANG, Fr, to class with, to associate.

Vaisseau du premier RANG, *Fr.* a first rate ship of war.

Vaisseau du second, ou troisieme RANG, *Fr.* a second or third rate.

RANGER *la côte*, Fr. to sail along the coast.

Placer par RANG *de taille*, Fr. To size.

RANGE, in *gunnery*, the distance from the battery to the point where the shot or shell touches the ground.

Point blank RANGE, when the piece lies in a horizontal direction, and upon a level plane, without any elevation or depression, the shot is said to take a point blank range. See POINT BLANK.

RANGEE, *Fr.* a series of things placed upon the same line.

RANGE, EE, *Fr.* the participle of *Ranger*, drawn out or placed in regular order.

Bataille RANGEE, *Fr.* a pitched or set battle, in which two armies are drawn up opposite to one another.

RANGER, *Fr.* to place in a certain line or order.

RANGEZ *vous*, Fr. a term in general use among the French when any number of persons are ordered to clear the way, by drawing up on one side or the other of a street or road.

RANGING, in *war*, disposing the troops in proper order for an engagement, manœuvres, or march, &c.

RANK. Range of subordination, degree of authority. The relative situations which officers hold with respect to each other, or to military things in general. Hence *regimental rank*, *local rank*, *rank in the army*, &c.

One of the egregious errors of the British military institutions is, that the officers belonging to the life guards are entitled to the rank of lieutenant colonel, when they obtain, or purchase a majority, provided they have been seven years. Their commissions in this case run major and lieutenant colonel. But it an officer should not have completed either of those periods, he obtains the rank of major only, until its completion. A lieutenant colonel receives the rank of full colonel if he has been seven years major, or twenty one years in the British service. Cornets in the life guards rank as sub-lieutenants in their own corps, and as first lieutenants in the army. The English fuzileers enjoy the same privilege. Sub-lieutenants in the Welsh fuzileers rank only as second lieutenants in the army. Marines do the same.

With respect to rank in general, the following are the rules of the British army, by which the relative rank of the officers of the regulars, militia, fencibles, yeomanry cavalry, and volunteer corps, is to be determined.

Officers of the regular forces command the officers of equal degree, belonging to the other services; with the exception after mentioned.

Officers of the militia, fencibles, yeomanry cavalry, and volunteer corps, rank together according to the dates of their respective commissions.

Notwithstanding this regulation, such officers of fencibles as have commissions dated on or before the 25th July, 1798, continue to rank with the officers of the regular forces of equal degree, according to the dates of their respective commissions: unless when acting in conjunction also with officers of the militia; in which case, if the commission of the fencible officer be of a junior date to that of a militia officer, of the same degree, the regular officer of equal rank, although his commission be of a junior date to that of the fencible officer, commands both.

It will further be observed, that all commands in the regular forces fall to the eldest officers in the same circumstances, whether of cavalry or infantry, entire or in parties. In case two commissions of the same date interfere, a retrospect is to be had to former commissions. Should it happen, as it possibly may, that the original commissions interfere, it must be decided by lot.

In page 49 of the Articles of War, it is laid down, that the eldest officer is to command when any troops of the horse guards, and the regiment of horse guards, shall do duty together; or when any of the life guards, horse or foot guards, shall do duty with any other corps. The regiments of life guards, doing duty unmixed, are to be considered as one corps; and the officers are to take rank according to the dates of their commissions. The same holds good with respect to the foot guards. Regular officers with whom militia officers take rank as youngest, command officers of equal degree in the fencibles, yeomanry cavalry, and volunteer corps, who are to rank together according to the dates of commissions.

To RANK *with*, to hold the same relative situation with regard to others. Thus post captains of three years standing in the royal navy rank with colonels in the army; and lieutenants in the guards rank with captains in the line or regulars. Officers in the militia rank generally with the regular forces as junior of their respective commissions. An ensign in the guards ranks no higher than an ensign in the regulars.

To RANK *with*, in a figurative sense, to be in equal estimation, to bear the same character for skill and valor, &c. viz. lord Nelson ranks with the bravest seaman that England, or any other country, has ever produced; Bonaparte with the greatest general in ancient or modern history; Washington with Cincinnatus; and Montgomery with Wolfe, Decatur with Desaix, or Lannes.

Brevet-RANK. Rank without pay, nominal distinction, which sometimes entitles the holder of it to command in mixed service.

Brigade majors rank with captains, provided they have that rank in the army, independent of their staff appointment. But aids-de-camp do not possess any rank in that capacity with regard to the army. The latter constitutes a part of the general's family, and are paid out of his allowance; they are in fact the mere carriers of his orders in the field, and his domestic inmates at home, &c. The former belonging to the brigade, and are a necessary part of its effective force.

There is likewise a sort of brevet rank which exists in the several regiments belonging to the British service, and is confined to the rank and file, or corporals and private soldiers. Thus a lance serjeant is a corporal who does the duty of serjeant without the pay or emoluments of the latter; and a lance corporal is a private soldier who does the duty of corporal. So that *lance*, which comes from *lansquenet*, which signifies a private soldier, and is derived from the German, and when put before serjeant or corporal, points out that a private soldier has the brevet rank of one of those situations. Captains of companies appoint or reduce lance serjeants or corporals, according to their judgment.

RANK, *and precedence in the army and navy*, are as follow:

Engineers RANK. Chief, as colonel; director, as lieutenant colonel; sub-director, as major; engineer in ordinary, as captain; engineer extraordinary, as captain lieutenant; sub-engineer, as lieutenant; practitioner engineer, as ensign.

Navy RANK. Admiral, or commander in chief of the British fleet, has the rank of a field marshal; admirals, with their flags on the main top-mast head, rank with generals of horse and foot; vice-admirals, with lieutenant generals; rear-admirals, as major generals; commodores, with broad pendants, as brigadier generals; captains of post ships, after three years from the date of their first commission, as colonel; other captains, as commanding post ships, as lieutenant colonels; captains not taking post, as majors; lieutenants as captains.

The rank and precedence of sea officers in the classes abovementioned, are to take place according to the senority of their respective commissions in the sea service. Post captains commanding ships or vessels that do not give post, rank only as majors during the time they command those vessels.

Nothing in this shall give any pretence to land officers to command any of his majesty's squadrons; nor to any sea officer to command on shore; nor shall either have right to demand the military honors due to their respective ranks, unless upon actual service.

RANK, is a straight line made by the soldiers of a battalion, or squadron, drawn up side by side: this order was established for the marches, and for regulating the different bodies of troops and officers which compose an army.

Doubling of the RANKS, is the changing one rank to two, by telling off the files, *one, two, one, two*, &c. and by the word, *even files to the rear double*; this method is frequently used in the manœuvres of a regiment.

RANK *and file*, men carrying the firelock, and standing in the ranks, are called rank and file. Thus corporals are included in the return which is made under that head.

RANKS *and files*, are the horizontal and vertical lines of soldiers when drawn up for service, &c.

RAPE, *Fr.* a rasp, a file.

RAPIDES, *Fr.* Falls in a river are so called; as the falls in the rivers Ohio and St. Laurence, &c.

RAPIER, (*Rapière*, Fr.) formerly signified a long, old fashioned broad sword, such as those worn by the Scotch regiments; but now is understood only to mean a small sword, in contradistinction to a broad sword.

RAPINE, *Fr.* Rapine, plunder.

RAPPORT, *Fr.* Report.

RAPPORT, *Fr.* in mathematics, a term frequently used among the French. It bears the same import as *raison*, and signifies the relation which two quantities have one with another. Thus the *rapport* or relation between twelve and six is the same as between six and three.

RAPPORTEUR, *Fr.* in geometry,

an instrument made in the figure of a half-circle, and divided into one hundred and eighty degrees. We call it a *protractor*. It is used for the purpose of ascertaining the openings in angles, and to take plans upon paper.

RAREFACTION, the extension of the parts of a body, by which it is made to take up more room than it did before. It is essentially connected with gunnery; for in proportion to the rapid combustion and consequent rarefaction of air, produced by the ignition of gunpowder confined in the chamber of a gun, so will be the force of expulsion with which the charge is propelled.

RAS, *Fr.* Every barge and vessel, &c. which is without any deck or upward covering, is called by the French *batiment ras*.

RASANTE, *Fr.* See LIGNE RASANTE.

RASANT, } in *fortification*, rasant
RAZANT, } flank, or line, is that part of the curtain or flank whence the shot projected raze or glance along the surface of the opposite bastion.

RASE, *Fr.* Pitch and tar mixed with tow for the purpose of caulking a ship.

RASLE, *Fr.* This word is used in some parts of France to signify rafter, and means the same as chevron.

RASALDAR, *Ind.* the commander of *Rasallah*, which is ten thousand horsemen armed.

RASSEMBLER, *Fr.* to collect together.

RASSEMBLER *des troups*, Fr. to call troops or forces together.

RASSEMBLER *les debris d'une armée*, Fr. to collect together the broken parts, or scattered remnants of an army. It is likewise used with the personal pronoun, viz. *Tous les soldats dispersés se rassemblerent autour du drapeau.* All the soldiers or troops that had been dispersed, gathered together round the standard or colors.

RASSEMBLER *les forces d'une cheval*, to put a horse well upon his haunches.

RASSIS, *Fr.* Stale; as *pain rassis*, stale bread.

RASSURER, *Fr.* to restore confidence, to encourage, to invigorate. *Quelques soldats commencionent à s'ébranler, quand l'exemple de leur capitaine les rassura.* Some soldiers began to give way, when the example of their captain inspired them with fresh confidence.

RAT, *Fr.* literally means rat. It is used in a figurative sense, viz. *Une arme à feu a pris un rat.* A musquet has missed fire.

RAT. *Fr.* a sort of floating platform made of planks which are tied together upon two or three masts. It is used in caulking ships, &c.

RATAN, a cane used by serjeants of companies, in the British service in drilling the men, and with which, in other countries, the non-commissioned officers and privates, are beaten for slight offences; the Austrian discipline was thus conducted, till they have been beaten out of their manhood and self-respect. The Prussians abolished this barbarous custom after the battle of Jena.

RATELIER, *Fr.* a rack used in armories; &c. for the purpose of keeping firearms arranged in proper order.

RATER, *Fr.* to miss fire. *Son pistolet a raté.* His pistol has missed fire.

RATER likewise means, figuratively, to be unsuccessful in an application. *Il a raté sa charge.* He did not get the commission.

RATES *of subsistence*. See PAY.

RATION, a certain allowance which is given in bread, &c. or forage when troops are on service, for an officer or soldier in the British service.

Complete Ration of the small species.

Flour, or bread	1 1-2 lbs.
Beef	1
Or pork	1-2
Peas	1-4 pint.
Butter, or cheese	1 oz.
Rice	1 oz.

When the small species are not issued, 1 1-2 lbs. of flour or bread, with 1 1-2 lbs. of beef, or 10 oz. of pork, forms a complete ration: or 3 lbs. of beef; or 2 lbs. of cheese; or half a pound of rice, forms a complete ration.

At sea the ration is different. The following table contains the allowance for six soldiers, or four seamen on board of ship, for each day in the week. Women are provisioned at a half and children at one fourth of a soldier's allowance, but receive no rum.

Days of the Week.	Sunday,	Monday,	Tuesday,	Wednesday,	Thursday,	Friday,	Saturday,
Bread.	lb 4	4	4	4	4	4	4
Beer, gallons, or half pints of spirits, or pints of wine.	4	4	4	4	4	4	4
Beef, pieces of 8 lbs.	—	—	1 or 6lbs. of flour or 1-2lb. of suet, and 1lb. of raisins.				1 or as above.
Pork, pieces 4 lb.	1				1		
Pints of peas.	2			2	2	2	
Do. oatmeal.		4		4		4	
lbs. of butter.		½		½		½	
lbs. of cheese.		1		1		1	
Vinegar.	1 quart per week.						

The above are served out by full weights and measures.

When flour, suet and raisins are put on board, they are to be served out in equal proportions with beef, viz. half in beef; the other half in flour, suet, and raisins, on each beef day.

4 lbs. of flour, or 3 lbs. of flour with 1-2 lb. of raisins, (or 1-4 lb. of currants) and 1-4 lb. of suet, are equal to 4 lbs. of beef, or 2 lbs. of pork with peas, but are not to be issued in lieu of the latter, except unavoidable, and then the quantities must be certified.

1-2 lb. of rice is equal to a pint of oatmeal; 1-2 lb. of sugar is equal to 1-2 lb. of butter; and 1 lb. of rice is equal to 1 lb. of cheese; 1 pint of oil is equal to 1 lb. of butter, or 2 lbs. of cheese, that is, a pint of oil for the proportion of butter and cheese.

A pint of wine, or half a pint of brandy, rum, or arrack, is equal to a gallon of beer; 1 lb. of fresh beef is equal to 1 lb. of salt beef; and 1 1-2 lb. of fresh beef is equal to 1 lb. of pork.

No wine or spirits are to be issued to the troops while in port, nor at sea, till after all the beer is expended.

The masters of transports are to produce a certificate from the commanding officer of the troops on board, of the quantity expended. If any doubt be entertained of the provisions being full weight, a cask must be weighed in the presence of the commanding officer, the master, and the mate, and the master may upon the certificate of the commanding officer, and the oath of the mate, issue as much beef and pork as will make up the deficiency.

The weight of each must be as follows: 14 pieces of beef, cut for 8 pound pieces taken out of the cask as they rise, and the salt shaken off, are to weigh 112 lbs. avoirdupois. 28 pieces of pork cut for 4 lb. pieces, are also to weigh, under like circumstances, 112 lbs.

The deductions to be taken for provisions from the pay of officers, non-commissioned officers, or men, are the same for all ranks, and in all corps, under the like circumstances of service, when serving out of Great Britain, on stations where provisions are supplied by the public: also, when embarked in transports or other vessels, (except when serving as marines;) also when prisoners of war, are maintained at the expence of Great Britain; also when in general hospitals, whether at home or abroad, a deduction of *sixpence per day*.

A deduction of *three-pence halfpenny* from the pay of every non-commissioned officer and private in Jamaica, in New South Wales, or Gibraltar. Non-commissioned officers and soldiers serving as marines shall not be liable to any deduction from their full pay on account of provisions.

Ration for a horse on home service in 1796: 14 lbs. of hay, 10 lbs. of oats, 4 lbs. of straw; for which a stoppage is made of *sixpence*.

The French use the same term, viz. *Ration de foin*, a ration of hay. *Double ration*, double ration. *Demi-ration*, a half ration.

RATION *d'un fantassin*, Fr. the ration or allowance which is given to a foot soldier. During the French monarchy it consisted of twenty-four ounces of ammunition bread, one pint of wine or beer, Paris measure, one pound of beef, veal, or mutton.

RATION *pour les troupes de la maison du roi*, Fr. the ration for the household troops, during the French monarchy, consisted of two brown loaves of 22 ounces each, two pints of wine, or two pints of cyder or beer, Paris measure, and two pounds and a half of beef, veal, or mutton.

RATION *de cavalrie*, Fr. Each man belonging to the old French cavalry, received daily one ration, consisting of thirty-six French ounces of ammunition bread, one pint and a half of wine, cyder, or beer, Paris measure, and two pounds of beef, veal, or mutton.

RATION *de dragons*, Fr. the ration allowed to each dragoon in the old French service, consisted of twenty-four French ounces of ammunition bread, one pound and a half of meat, one pint of wine, Paris measure, or one pot of cyder or beer, ditto.

RATION *de fourrage*, Fr. A ration of forage in the old French service, consisted of one pound of hay, and one bushel of oats, Paris measure.

RATIONS *des officiers du regiment des gardes Francoises*, Fr. rations allowed in a regiment of French guards during the monarchy. These rations differed very considerably from those already stated. The particulars may be found in the third volume of the Dictionnaire Militaire, page 255.

RATISSOIRS, *Fr.* Graters used by the men employed in making saltpetre.

RAVAGES *of War*, the spoil, plunder, or waste, made by contending armies in the theatre of war.

RAVELIN, *Fr.* See FORTIFICATION.

RAVELINS, in *fortification*, are works raised on the counterscarp before the curtain of the place, and serve to cover the gates of a town, and the bridges. They consist of two faces, forming a saliant angle, and are defended by the faces of the neighboring bastions. They are the most in use of all out-works, and are by the soldiers most commonly called half moons, or *demi-lunes*. They should be lower than the works of the place, that they may be under the fire of the besieged. Their parapets, as those of all other out-works, should be cannon proof; that is, about 18 feet thick.

RAVINE, in *field fortification*, a deep hollow, usually formed by a great flood, or long continued running of water; frequently turned to advantage in the field.

RAVITAILLER *une place*, Fr. To

throw stores, ammunition, and provisions into a fortified place.

RAY See ARRAY.

RAYE, *Fr.* rifled.

Canon RAYE, *Fr.* rifle barrel.

RAYON, *Fr.* in geometry, *Radius.*

RAW, in a military sense, unseasoned, unripe in skill, wanting knowlege in military tactics, &c.

RAW *troops*, unexperienced soldiers; men who have been little accustomed to the use of arms. This term is generally used in opposition to *veteran troops.* A cool and wise general will always know how to make the most of that part of his army which is composed of raw troops; and a rash intemperate one will equally miss the proper application of the spirit and manhood, which ignorance of danger, and confidence of success, almost always give. Some of the most brilliant actions, and some of the greatest victories have been achieved and won by means of that daring impetuosity, which hurries *raw* troops into the thickest of an enemy. A thousand instances might be adduced from ancient and modern history, to prove the correctness of this remark. It may, perhaps, be sufficient for our purpose, to refer the curious reader to the bold and unexampled charge which was made against the French troops in Germany, by Elliot's new raised light horse in the seven years war. The laurels of Emsdorff, are still the glory of the 15th regiment of dragoons. The battle of Jemappe and Fleurus, were won by raw troops; but they had officers who knew how to lead them. Bunker's hill battle was fought by raw troops, as was that of Germantown; bad generalship alone lost the advantage to the American troops at Germantown.

RAZED, any works or fortifications when demolished, are said to be *razed.*

READY, a word of command in platoon firing, being a contraction of *make ready.* See MANUAL.

REALE, } *Fr.* The largest or
Galère REALE, } principal galley used in Catholic countries, is so called. The first galley belonging to the pope is called *Réale*, because it takes precedence of all vessels, in the service of the different Roman Catholic powers.

REAR, in a general acceptation, any thing situated or placed behind another. The term is variously used in military matters, viz.

REAR *of an army*, signifies in general the hindermost part of an army, battalion, regiment, squadron, or company, &c. Generally the third component part of a large body of forces, which consists of an advanced guard, a main body, and a rear guard

REAR *guard* A certain proportion of an army or regiment, which acts, in various capacities, according to circumstances, and the extent of military operations. The rear guard of an army is often the reserve, &c. The rear guard of a regiment is usually appointed for the purpose of picking up stragglers, &c. The old grand guards of the camp, always form the rear guard of the army, and are to see that every thing comes safe to the new camp. See GUARD

Forming to the REAR. An alignment may be formed to the rear of any given battalion or platoon; either by posting guides, or moving a battalion to the required position; each battalion or platoon to be then marched to its relative place in the original line. So columns may be formed upon a given section or platoon marched or pivoted in a required position.

REAR *line*, of an army encamped, is usually 1200 feet at least from the centre line; both of which run parallel to the front line, as also the reserve

REAR *rank*. When a regiment, troop, or company is drawn up two or three deep, the last line of men is called the rear rank.

REAR *ranks*, all the ranks of a line, regiment, troop, or company, which are ranged in order behind the front rank.

REAR *rank, take open order.* A word of command which is given in the manual and other parade exercises. It is likewise used in marching by the general at a review, or on guard mounting, &c. See OPEN ORDER.

REAR *half files*, are the three hindermost ranks of the battalion, when it is drawn up six deep.

REAR *front*. When a battalion, troop, or company is faced about, and stands in that position, it is then said to be rear front. It sometimes happens, that through oversight, forgetfulness, or ignorance, and confusion, troops are so clubbed, that, on the deployment of a column, the different troops and companies not only lose their stations in the line of original formation, but the rear rank men stand where the front rank men ought to be; in the latter case, they appear rear front. This error might be easily remedied, by counter-marching the several troops or companies.

REAR *rank lengthening out a line.* Although a single battalion may, by opening its companies and files, *from 3 deep form 2 deep*, by introducing its rear rank into the other two, yet a considerable line posted, which is to be lengthened out to one or both flanks by its rear rank, must, to greater advantage, perform such operation, by each company quarter wheeling the sub-divisions of its rear rank and facing to the hand they are to march to; the last rank of each company closes up to its first; the sub-divisions, of each battalion, move up to open distances from their respective head ones, and from each other; officers from the rear are appointed to command them; those of each or of every two battalions, being considered as a battalion, they march on in column, and prolong the line. By this mode of lengthening out the line, the two front ranks remain undisturbed, and they protect the movement which is made unseen behind them.

REARWARD, the last troop or company.

RUBEEWAR, *Ind.* Sunday.

REBEL, any one guilty of rebellion.

REBELLION, a traitorous taking up of arms against the liberties of a people, or the established constitution of government and laws.

REBOUND, the act of flying back in consequence of motion impressed and resisted by a greater power.

To **RECEIVE**, in a military sense, to wait the approach of a friend or foe.

To RECEIVE *an enemy*. To make the best disposition possible of your troops, for the purpose of meeting the attack of an enemy that is advancing against you.

To RECEIVE *a general or reviewing officer*. To be drawn up according to specific regulations which are laid down, for the purpose of paying the compliments that are due to the rank of a superior, or commanding officer.

RECEPTION *d'un officier dans un corps*, Fr. A ceremony which was performed in the old French service, when an officer first joined. This was done by beat of drum in front of the company. The officer, being dressed, accoutred, and armed according to regulation, faced towards his men, and as soon as the drums had ceased, took off his hat to his commanding officer, who did the same to him, and then addressed the company in the following terms:

De par le roi, soldats, vous reconnoîtrez M..... pour votre capitaine, ou pour lieutenant, de la campagnie, et vous lui obéirez en tout ce qu'il vous ordonnera pour le service du roi en cette qualite.

From the king! or pursuant to the king's will. Soldiers, you will acknowlege M...... to be captain, or lieutenant, of the company, and you will obey whatever orders or commands he may issue, in that capacity, for the good of the king's service.

When a colonel or major was received at the head of a corps, the word *soldats, soldiers*, was altered into *messieurs, gentlemen*; the latter term including both officers and men. On this occasion, the corps of captains and subalterns formed a circle; round them stood the serjeants drawn up in the same manner, and beyond the serjeants, the drummers, &c. The different circles being concentrical to each other. The field officer, who was to be admitted or to take command, stood in the centre of the whole, surrounded by the principal officers of the regiment.

RECETTE, *Fr.* a trough, which persons employed in preparing saltpetre, &c. places beneath tubes filled with broken rubbish, ashes, &c, for the purpose of receiving the liquid that is filtered through.

RECHARGE, a renewal of the charge or attack.

RECHAUD, *Fr.* a chaffing dish, or pan used for various purposes, particularly during a siege. They are filled with burning materials and hung in different parts of the walls, so as to throw light into the ditches, and to prevent surprizes.

RECHUTE, *Fr.* literally means a second fall; but in fortification it signifies a greater elevation of the rampart in those spots where it is likely to be commanded.

RECIPIANGLE, *Fr.* recipient angle. A geometrical instrument, which is much used among the French, for taking the quantities of angles, especially in drawing plans of fortification. It consists of two moveable rules, made in the shape of a square rule. The centre of one of its hands is marked by a semi-circle, which is divided into 180 degrees.

RECIPIENDAIRE, *Fr.* One who offers himself for any office or appointment.

RECOIL, (*recul*, Fr.) a falling back. The retrograde motion made by any piece of firearms on being discharged, which is a consequence of the rarefied air pressing on all sides, in order to expand itself with freedom. This term is generally applicable to firearms, especially to pieces of ordnance, which are always subject to a recoil, according to the sizes and the charge they contain, &c. Guns whose vents are a little forward in the chase, recoil most. To lessen the recoil of a gun the platforms are generally made sloping towards the embrasures of the battery.

To RECOIL, *reculer*, Fr. To fall back, to run back in consequence of resistance or repercussion.

RECOIL *of Field Guns on travelling carriages, upon Elm Planks.*

Kind.	Charge.		1 shot, at 1° 30′ Elevation.	2 shot, at 1° 30′ Elevation.	Case shot, at 3° 45′ Elevation.
	lbs.	oz.	Feet.	Feet.	Feet.
12 Pr. Medium	4	—	12	25	8½
6 Pr. Heavy	2	—	7	11	7½
6 Pr. Light	1	8	12	21	10
3 Pr. Heavy	1	—	7	5	3½

Recoil of Sea Service, Iron Guns, on Ship Carriages, upon a horizontal platform.

Charges of powder and shot.	Elevation.	32 pr.		24 pr.		18 pr.	
	deg.	ft.	in.	ft.	in.	ft.	in.
½ of powder and 1 shot	2	11	—	11	—	10	6
⅓ of powder and 2 shot	4	19	6	18	6	18	—
¼ of powder and 2 shot	7	11	—	12	6	12	—

Recoil *of Land Service, Iron Mortars, on Iron beds.*

		Ft.	In.
13 Inch, with a charge of	6 lbs.——	4	2½
10 Inch,	3 lbs.——	2	10
8 Inch,	1 lb. 9 oz.	3	10

RECOLLECTION. A mode of thinking, whereby those ideas sought after by the mind, are brought again to view. A retentive memory, and a cool collected presence of mind, are necessary qualities in every good officer; and military men should often exercise the faculty of thinking, in order to become instantly familiar with what they have formerly studied and occasionally practised. For memory, like every thing else, acquires strength, and is encreased by cultivation. *Memoria, ut in cæteris rebus, colendo augetur.*

Necessary RECOLLECTIONS for the exercise of a battalion.

It appears, that the front of any division or body is, in ordinary paces of 24 inches, nearly 3-4ths of the number of files of which it is composed. That the circumference of the quarter circle which it describes, is equal in number of paces to the same as the number of files of which it is composed, counting the paces of the centre man of the front rank at 24 inches, allowing 6 inches in addition to the military pace of 24 inches. That the number of files being once ascertained in each division, the officer commanding it must, on all occasions, recollect the number of paces that are equal to his front, by finding the centre man of the front rank.

The field officers and adjutants must always recollect the number of paces the front of the battalion and its divisions occupy, in order to take up ground exactly in all formations; and this is done by counting the number of men from one flank to the centre, which gives the number of military paces.

To RECOMMEND. When a young gentleman wishes to enter into the army, his first object is to get well recommended for that purpose. There is no regulation to determine fitness, and on this account a great many are appointed who are afterwards found unfit.

RECOMMENDATION, in a military sense, is a letter from some influential character, member of congress, or other citizen, stating an individual to be properly qualified for a situation in the army.

RECOMPENSES *militaries*, Fr. See MILITARY REWARDS.

RECONNOITRE, *Fr.* To reconnoitre.

RECONNOITRE *une place*, Fr. To reconnoitre a fortified town or place.

RECONNOITRE, in *military affairs*, implies to view and examine the state of things, in order to make a report thereof.

Parties ordered to reconnoitre, are to observe the country and the enemy; to remark the routes, conveniences, and inconveniences of the first; the position, march, or forces of the second. In either case, they should have an expert topographer, capable of taking plans readily: he should be the best mounted of the whole, that in case the enemy happen to scatter the escort, he may save his works and ideas.

All parties that go for reconnoitring only, should be but few in number. I would never chuse more than twelve or twenty men. An officer, be his rank what it will, cannot decline going with so few under his command: the honor is amply made up by the importance of the expedition, frequently of the most interesting consequence, and the properest to recommend the prudence, bravery, and address of an officer that has the fortune to succeed.

It is previously necessary that the officer ordered on this duty should be well acquainted with the country, the roads, and the distance of the enemy. His party must consist of men of approved fidelity, part of whom should be disguised. This detachment must march off in the night. The men must have strict orders neither to smoke tobacco, make a noise, nor speak. The officer must be provided with two guides, who are to be strictly interrogated, but are to remain ignorant of the route you intend to take. A detachment of this kind should be furnished with subsistence for two or three days. The horses are to be fed every ten or twelve miles, for it is absolutely necessary that they should be always fresh and fit for duty. The officer will take care never to halt, but at a distance from any road, and also take every precaution to prevent his being surprised, whilst his horses are feeding, &c.

RECONNOITRING. The following necessary observations to be made in examining a country in a military point of view, are principally translated from the

Aide Memoire, but improved by some judicious remarks from Mr. Landman's introduction to reconnoitring.

Before an officer sets out to reconoitre a country, he should trace out from the best map he can procure, its principal features, which will serve him as a guide in his progress through the principal parts which are to be the subject of his observations, and enable him to connect the whole into one grand plan.

His observations should be expressed by written remarks, and by sketches. For this purpose he must be provided with a sketch book, on the right hand page of which, he may express the appearance of the country by sketches, and on the left the remarks made on particular parts, with the names of the towns, their distances asunder, &c. with proper references to the sketches. The scale most proper for this purpose is 2 inches to a mile; if therefore, the sketch book be made 6 inches wide, and the leaves divided by lines into three equal parts, each division will be one mile, which will be a sufficient scale for the purpose.

1st. *Roads.* The principal points to be attended to in examining roads for military purposes, are, their direction; the villages, countries, and rivers, which they pass through; the roads which cross them; their names and the seasons in which they are in best condition; and if ever impassable; their breadth, whether variable or constant; their bottoms, of what principally formed; their ascents and descents, whether practicable for all kinds of carriages. The enclosures may be hedges, ditches, walls, or fences. If the roads require repair for the transport of artillery and other heavy carriages, observe if the necessary materials are at hand. If they pass over rivers, remark whether by bridges or fords; if through marshes, whether by causeways or otherwise. If 2 or more roads pursuing the same route, and by which different columns may march, at any part join or cross each other, it will be necessary to observe, whether the march of the columns will be thereby impeded. If they only cross each other, it will be sometimes possible in hollow ways, to throw a temporary bridge across the deepest, by which one column may pass over and the other under the bridge, without interrupting each others march.

2. *Fords.* A ford for cavalry ought not to be deeper than four feet; for infantry not more than three feet. Observe the banks of the ford at each side; their form, steepness, and height; their situation as to the turnings of the river. Their bottom, whether passable for carriages. Observe marks by which the ford may be readily found; points from which it may be protected. Notice the rapidity of the water; whether its height be variable; its direction, its breadth, and the means by which the ford may be destroyed or rendered impassable.

3. *Inundations.* Learn the manner of working the sluices; the time in which the inundation may be effected; its extent and depth. Observe how the dam may be protected; its height and solidity; whether it can be easily raised, or easily destroyed; whether it is commanded by distant positions, and whether the inundation can be otherwise drained. Notice the adjacent country.

4. *Springs and wells.* Attend to the quality and quantity of the water; whether it will serve for the cavalry, as well as infantry, and the manner of its being drawn. Observe the situation of the spring, and of its source, whether it can be protected, and the enemy prevented from cutting it off.

5. *Lakes, marshes, and swamps.* Learn their cause; if arising from a moist soil, the overflowing of rivers or from springs. Observe their situation, and the appearance of the surrounding country; the best means of crossing them. If they are divided by causeways, notice their breadth and condition; if not, remark if causeways can be easily established, and whether the swamp can be drained, and whether it is passable at any season of the year. Observe the points from which the causeways can be defended against the passage of an enemy's column. Learn whether or not the swamps are subject to fogs; and at what seasons they are most hurtful.

6. *Of woods and forests.* Remark their extent; their situation; their thickness; whether the trees are lofty or low: whether there is much underwood. Observe if the different clumps form openings or passes; and their extent; whether their sides are formed of thick wood or brush; whether their breadth is uniform, or widens at particular parts. Remark whether the ground of the forest be level or hilly, swampy or dry. Observe the nature and condition of the roads (for remarks to be made on these, see the article *roads*;) observe also the means the forest affords of intrenching; of making fascines, abbatis, &c. Attend to the face of the country round the forests, whether cultivated fields or meadows: whether it affords positions; is intersected by rivulets, swamps or ravines.

Remark the castles, villages, towns, &c. in the neighborhood; and their distances from the skirts of the wood.

Go round the wood and examine its principal debouches; observe the ravines, rivulets, roads, &c. issuing from it, and learn their direction.

7. *Heaths.* Notice for what nature of troops they are best calculated. The nature of hedges and brush wood; some form a good breast work. Observe the directions of the rivulets, roads, and ravines. When the ground of a heath is of the common color, the roads are usually good: but when it is blackish and mixed with white sand, the roads are generally impassable in winter seasons.

8. *Canals*. For this article see also the observations on *rivers*. Observe their intention; the nature of the soil in which they are dug, their breadth and depth; their locks; the craft found upon them; the best means of protecting or destroying them: learn the countries they pass through.

9. *Rivers*. Learn in what country they arise, and where empty themselves; the nature of the countries they run through, and whether they belong to us or the enemy. Learn the extent to which they are navigable; and if they ever freeze over, whether strong enough to bear troops and carriages. Notice the quality of the water, its course, currents, depths, and breadths. The banks and the beds of the rivers. Observe the nature and number of craft that navigate them; and the mills upon their banks, whether of wind or water. Visit the bridges and fords; and make the proper remarks on their nature and situation. Learn whether the rivers ever overflow their banks, and at what seasons; and whether or not this causes inundations. Observe the most favorable points for crossing, and the roads leading to these points. The turnings and windings of the rivers, the form of their peninsulas; and the most favorable situations for throwing over bridges. If there are any wharves on the banks, observe what craft can lie along side of them.

If there are islands in the rivers, note their size, their banks; whether inhabited, cultivated, woody, or barren; and whether they command the channel.

Observe the mountains and high grounds near the rivers; remark their distance from the banks, and the advantages, or disadvantages which they offer. Learn what branches or confluence of other rivers there are either above or below, the best situations for crossing. Examine the positions which the adjoining country affords an army to protect the passage of the river; and whether in a perpendicular or parallel direction; and the routes by which three or four columns may arrive at the place.

10. *Passes*. Observe their breadth, their length, and their situation; the nature of the adjacent country; the best positions to occupy to cover a retreat; or to dispute the pass. How the troops would be best arranged; and the number that would be required for this purpose.

11. *Ravines*, *vallies*. Observe the nature of the soil; whether rocky, or of loose flints. If the sides are rugged and steep, whether they can be easily scarped off. The points that command them: whether storms or floods are to be apprehended; and at what seasons most expected.

12. *Cultivated lands*. Notice their state of cultivation: their productions; their time of harvest. Learn what quantity of wheat, rye, barley, oats, maize, or other grain they produce, over and above the necessary subsistence of the inhabitants. How much grain or hay they yield per acre.

13. *Orchards*. Observe whether they are thick planted and afford a good cover; their enclosures, whether wood fences, hedges, ditches, walls, &c.

14. *Bridges*. Remark their situation; their length and breadth; the materials of which they are built; their strength, whether sufficient to bear artillery; the roads leading to them; their situation, as to the turnings of the river: their purpose; if to connect towns and villages, the nature, direction, and breadth of the streets leading to them. Observe the country around, whether flat or commanding: study the best means of fortifying the bridge head; and observe the best and most expeditious mode by which the bridge may be destroyed, if necessary.

15. *Mountains*, *hills* Amongst high mountains, such as the Alps, roads are very rare; it is seldom more than the vallies that are inhabited and accessible for troops; observe their slopes, if steep or rugged. Examine the positions: means of gaining the summits: and note the state of cultivation and general appearance of the vallies; the pasturage, forage, cottages, villages, castles, roads, paths, and passes. Distinguish the principal chains of hills and their direction. Their relative heights; whether they are sufficiently extensive to form a line of defence; their communications; their strong points; positions proper for batteries, &c. Whether practicable for cavalry and artillery.

16. *Coasts*. Their nature; whether bordered by sand hills; surrounded by rocks, which render their approach dangerous; or by shoals, which make their access impracticable; note the points and headlands proper for the forts and batteries to defend the anchorage, ports, harbors, or other accessible parts. If there are any adjacent isles, perhaps they will serve for the erection of advanced batteries, to form a barrier to the efforts of an enemy. Observe the nature of the shores, bays, roads for shipping, &c. with the winds required to go in and out the harbors; and whether they are of easy access; their advantages and disadvantages, their size and depth of water. If a river empties itself on the coast, observe the particular channel for shipping, and whether it can be defended by any of the batteries. If the coast is already fortified, observe all the batteries, forts, or intrenchments, established for its defence, and the protection of the anchorage, &c. Examine the camps and other military posts, which cover the principal points, and the interior of the country. Estimate all the dangers to be run, and all the obstacles to be overcome in a descent, and point out the means of augmenting them. Observe the time of the tide most favorable for approaching the coast. Ascertain the number of artillery and other troops constantly on the coast, and the force that can be collected at a

short notice; and how soon they can be drawn to any particular point attacked Examine the system of defence adopted, and endeavor to improve it.

17. *Forts, redoubts.* Remark their form, whether ancient or modern; whether they are permanent or temporary; elevated or low; revetted or demi-revetted, with stone, brick or turf. Whether the ditch is wet or dry; fraized or palisaded; natural or artificial. Observe their situation; the face of the adjacent country; whether they effectually command the passes, or protect the country intended. The defence they are capable of making in their present state, and the improvements of which they are susceptible.

18. *Castles, citadels.* Their situation; their form; their extent; their object; the protection they give the city; their connection and communication with it. The present state of their defence, and the improvements of which they are susceptible. Their *Souterraines.*

19 *Villages.* Observe their situation: ascertain the number of families they contain; the nature of the land; the quality and quantity of their crops: their markets; the suburbs that supply these markets; their beasts of burthen: their flocks, herds, poultry, &c. The number of their ovens; quality of the water; stile of houses, barns, stables, and sheep walks. The situation of the church; the nature of the church yard, and its inclosures. The wind and water mills. Observe whether the village is surrounded by hedges, ditches, banks, or walls; whether it can be easily intrenched. Its streets; roads leading to it; and the face of the surrounding country.

20. *Cities not fortified.* Their situation; population; commerce; commodities; manufactures; the succors that may be drawn from them, as to men, horses, &c. Their squares and principal buildings. The defence they are susceptible of; whether they are surrounded by walls, old towers, ditches, &c. Their gates, and the roads leading to them. The face of the surrounding country.

21. *Fortified towns.* Their situation with respect to their position, and with respect to other towns in the neighborhood, whether in the first or second line; the assistance which they can afford each other. The succors that may be drawn from them, or that may be thrown into them in case of a siege. The direction which such relief, whether of men or provisions, ought to take, according to the side attacked; whether they will serve as depots or hospitals. The state of the fortifications (see the word *fortification* in the alphabet;) their nature; the strength of each front. The rivers in the neighborhood; the surrounding country within the range of the guns. The form of investment; what lines will be required considering the nature of the country, and the positions; and the means the country affords of executing them. The advantages which the ground would afford between the glacis and the lines, either to the besiegers or besieged; the means of establishing the most certain communications between the different quarters of the army, and the means of cutting them off.

22. *Positions.* Every military position ought to possess decided advantages of situation, and ought to be commanded in no part of its front, flank, or rear. All commanding grounds ought to be without the range of cannon. There are four principal objects to be attended to in the choice of a position: 1st. The advantages of the ground; 2d. the ground; 3d. the objects to be attained; and, 4th. the communications with the rear. The front of a position should be intersected by rivers, ravines, or broken ground, or any other obstacles which can prevent the enemy advancing in order of battle, and oblige him to pass through defiles; but a position becomes useless when the front is so covered by obstacles that the army cannot advance or move out of its camp when necessary; but no obstacles can be too great on the flanks. All obstacles which cover a position, or passes which lead to it, must be within the range of the artillery, or the enemy will pass them unmolested. In a flat country, where the ground does not afford commanding situations, a position is only more or less eligible, as being covered or protected by obstacles; these are very thick woods, in which there are very few roads; large rivulets which cannot be forded or passed without bridges; narrow roads; deep and broken ravines; ground much intersected with hedges, ditches, &c. but it is essential that all these obstacles should be under the fire of the artillery. It is always dangerous to occupy a position, which has its rear so covered by swamps, crossed by rivers or ravines, &c. as to render the retreat of the army difficult. The number of passes by which an army can retire must be examined and secured, and should never be less than 5 or 6. The rivers, brooks, &c. in front of a position, should never be depended upon for a supply of water, as the enemy may cut them off. The ground for a camp should not be too much intersected by hedges, ditches, or ravines, which occasion great intervals in the line, and obstruct the communications through the camp.

In an offensive position it is absolutely necessary that the army should not be too much confined by obstacles, but be at liberty to act in every direction; but in a defensive position, the fewer accessible points there are the better: and if the natural difficulties in front and flank are not sufficient to render an enemy's attack dangerous, they must be increased by redoubts, intrenchments, abbatis, inundations, &c The obstacles on the flanks should also be of such extent that they cannot be easily turned, without the enemy makes a very great circuit; and consequently expose his own flank, and weakens his line of communication. In case the enemy detaches a body to attack a defensive position in the rear; the front must be sufficiently strong to enable the general to oppose the enemy's detachment, by a strong body from his own army. In short, the enemy must not be able by any manœuvre to force the army to quit its position. The want of wood or water, or other supplies absolutely necessary for an army, renders every other advantage of a position useless; nor, can a position be long tenable, that is far removed from its depots; and has not its intermediate posts perfectly secure from the attacks of an enemy. These principles like all others in the ordinary affairs of war, are subject to those exceptions which the creative genius of the general may devise. Thus the first campaign of Bonaparte in Italy, was undertaken by an inferior force without magazines; the general determination was to seize those of the enemy; the same took place in the campaign in 1809, the force hastily collected had no magazines, but by the first battle he penetrated the centre, and cut off two of the corps of the Austrians, and took magazines adequate to six months subsistence from the Austrians. The general principles are nevertheless to be constantly regarded. For further remarks upon positions, see ARTILLERY IN THE FIELD, and *Amer. Mil. Lib.* Article RECONNOITRING.

To **RECOVER** *arms*, a position of the firelock when the piece is held with the lock in front of the left shoulder, and the sling to the front. The steadiness of soldiers is frequently proved by bringing them to the recover, after the word *take aim*.

To bring to the RECOVER. See RECOVER ARMS.

RECRUITS, (*Recrues*, Fr.) men raised for military purposes on the first formation of corps, or to supply the places of such as are disabled, or have lost their lives in the service. For particulars respecting the enlistment of recruits, see REGULATIONS.

RECRUITING, a term prefixed to certain corps and districts, which are specifically established for the recruiting service. Hence recruiting districts.

All recruits made for the regular army of the U. States, are inlisted for five years. In almost every service in Europe men are enlisted for a certain number of years, except the British, who inlist for life. Experience has convinced the powers upon the continent of Europe, that the system of binding a man during the whole course of his life to military subjection, is contrary to every sound principle of œconomy, and effective service.

The following are the established forms and instructions for the recruiting service, established by the United States.

Instructions to Recruiting Officers, respecting the rendering and settlement of their accounts of bounties and premiums for recruits.

I. Every recruit shall be inlisted, and receive the first payment of his bounty according to the form marked (A.)

II. Every officer employed in recruiting, shall, at the expiration of each calendar month, make musters according to the form marked (B.) embracing all the recruits inlisted by him; one set of which muster rolls he is regularly to transmit to the office of the paymaster of the army of the United States, at the seat of government.

III. Every officer on quitting the recruiting service, or before, if it is by proper authority required of him, shall state his accounts according to the form marked (C.)(D.) and transmit the same without delay to the office of the paymaster of the army of the United States, at the seat of government, or to the paymaster of the district in which he held his rendezvous; who shall with all possible dispatch examine and adjust them.

(A.)

STATE

I born in aged years, feet inches high, of complexion, eyes, hair, and by profession a do hereby acknowlege to have this day voluntarily inlisted as a soldier in the army of the United States of America, for the period of five years unless sooner discharged by proper authority; do also agree to accept such bounty, pay, rations, and clothing as is, or may be established by law. And I do solemnly swear, that I will bear true faith and allegiance to the United States of America, and that I will serve them honestly and faithfully against their enemies or opposers whomsoever; and that I will observe and obey the orders of the President of the United States, and the orders of the officers appointed over me, according to the rules and articles of war.

Sworn and subscribed to,
at this day of
18 before

Received of of the United States army, this day of 18 dollars, in part of my bounty for inlisting into the army of the United States for five years.

Signed duplicate receipts.

DOLLS. $\underline{^{100}}$

Witness.

(B.)

MUSTER ROLL of a Company of under the command of in the of the United States, commanded by from when last mustered, to

No.	NAMES.	RANK	Dates of appointment or inlistm't	To what time engaged or inlisted	*NAMES Present.*	*Remarks and alterations since the last Muster.*

RECAPITULATION.

	Captain.	Lieutenants.	Ensigns.	Serjeants.	Corporals.	Musicians.	Privates.	TOTAL.
Present fit for duty,								
Sick present,								
Sick absent,								
On detachment,								
On command,								
On extra service,								
On furlough,								
In confinement,								
Missing,								
Deserted,								
Dead,								

[This recapitulation goes on the back of the Return, and should properly appear on the head of the quarter-fold.]

(C.)

RECRUITING ACCOUNT of in the

Number of vouchers.	Names of recruits (arranged in alphabetical order.)	Dates of inlistment.	Periods of inlistment.	Bounty allowed.	Bounty paid.		Balances of bounty.		Premium allowed.	Bounty paid, and premium allowed.		When, and in what company or detachment these recruits were first mustered present after their inlistment.
				dolls	*dolls*	*cts*	*dolls*	*cts*	*dolls*	*dolls*	*cts.*	Remarks, &c.

☞ *The paper (D.) next page, is usually prepared or printed on the back of (C.)*

(D.)

Dr. *The United States in Account Current (for bounties and premiums) with* *Cr.*

Date.		*Dolls.*	*Cts.*	Date.		*Dolls.*	*Cts.*
	For bounties and premiums allowed for recruits, per within account,				By For cash received of him on account of bounties and premiums to recruits,		
	For advances made to the following officers, on account of bounties and premiums to recruits, for which advances the said officers are accountable, viz.						
	To per receipt No.						

I do hereby certify, upon my word and honor, as an officer and a gentleman, that this recruiting account exhibits a faithful, accurate, and true statement of all monies received and paid away by me, on account of bounties and premiums to recruits, not heretofore accounted for; and that the balance of dollars, cents, stated in the above account current, is due from to

Given at in the state of
this day of
18

Recruit-*horses*, are the horses brought up for completing the regiments of horse, and dragoons, &c.

RECTANGLE, *Fr.* rectangle.

RECTANGLE, } See Angle.
RECTANGULAR, }

RECTILIGNE, *Fr.* rectilinear, or right lined.

RECTILINEAR, } after the manner, or consist-
RECTILINEOUS, } ing of right lines.

RECUIT, *Fr.* A term used in the French foundaries of artillery, signifying the annealing or hardening of a cannon-mould.

RECUL *du canon*, Fr. The recoil of a piece of ordnance. See Recoil.

RECULADE, *Fr.* The act of recoiling or falling back.

RECULER, *Fr.* To fall back. This expression is used by the French in a figurative sense, viz.

Reculer *pour mieux sauter*, Fr. To fall back or retreat, in order to return and advance with more energy.

RED *hot shot*, shot made red hot, and in that state thrown out of cannon, against the vessels or magazines of an enemy.

REDCOAT, a familiar term for a British soldier.

REDANS, in *field fortification*, are a kind of indented works, lines, or faces, forming sallying and re-entering angles, flanking one another; generally constructed on the sides of a river which runs through a garrison town. They were used before bastions were invented, and are by some thought preferable to them. They are likewise called *Ouvrages à scie*, from their resemblance to a saw.

REDDITION *d'une place*, Fr. The surrender of a besieged place.

REDIGER, *Fr.* To draw out.

Rediger *des memoires*, Fr. To draw out memorials.

REDINTEGRATION, the act of restoring any single substance, from a damaged mixed body, to its former nature and properties. Thus col. Congreve, of the British artillery, by the *redintegration* of nitre from damaged gunpowder, has effected a vast saving in that article.

REDOUBT, (*Redoute*, Fr.) in *fortification*, a square work raised without the glacis of the place, about musquet-shot from the town; having loop-holes for the small arms to fire through, and surrounded by a ditch. Sometimes they are of earth, having only a defence in front, surrounded by a parapet and ditch. Both the one and the other serve for detached guards to interrupt the enemy's works; and are sometimes made on the angles of the trenches for covering the workmen against the sallies of the garrison. The length of their sides may be about 20 toises; their parapets must have two or three banquettes, and be about nine or ten feet thick. They are sometimes (in a siege) called places of arms.

Redoubt, is also the name of a small

work made in a ravelin, of various forms. See Fortification.

Redoubt, *castle* or *donjon*, a place more particularly intrenched, and separated from the rest of a ditch. There is generally in each of them a high position, from whence the country round the place may be discovered.

Detached redoubt, is a work made at some distance from the covert-way, much in the same manner as a ravelin with flanks. See Arrow.

Redoubts *en cremaillere*, differ from all the rest, because the inside line of the parapet is broken in such a manner as to resemble steps of stairs, or teeth of a saw; whereby this advantage is gained, that a greater fire can be brought to bear upon the defile, than if only a simple face was opposed to it, and consequently the passage is rendered more difficult.

REDOUBTER, *Fr.* To be alarmed at. *Redouter les armes d'un ennemi*, to be alarmed at the strength of an enemy.

REDOUTES *de terre*, Fr. redoubts that are hastily thrown up, and are made with earth, for the purpose of securing entrenchments, circumvallations, passages of rivers, &c.

Redoutes *de maçonnerie*, Fr. redoubts made of mason work. These are generally constructed in places where an enemy might derive advantage from establishing himself; they are likewise built upon the saliant angles of the glacis.

Redoutes *casematées*, Fr. Casemated redoubts. These are arched over and are bomb proof. Those constructed for the defence of Gibraltar, and for the security of Dover Castle, are of this description.

Redoutes *à machicoulis*, Fr. redoubts made of stone work, which are several stories high. The highest story juts out about one foot beyond the wall that surrounds or fronts the redoubt.

REDRESSER, *Fr.* in a military sense, to recover. To make straight again, viz.

Redressez vos armes, recover arms. *Redressez la ligne*, redress the line.

To REDRILL. To drill again. To put a soldier through the first elements of military training. Every soldier on his return from furlough, should be *re-drilled* before he is permitted to act in the ranks of his company.

To REDUCE *a place*, is to oblige the governor to surrender it to the besiegers, by capitulation.

To REDUCE *the circle*. To restore or bring back a battalion or company, which has been formed in circle, to its original position in line.

To reduce *the square*. To restore or bring back a battalion or battalions, which have been formed in a hollow or oblong square, to their original situation in line or column. On the word *form close column*, the front which the column is to have is noted to stand still by its proper officer, whether it be *flank* or *centre*; the other portions of the line are *faced* towards the point of formation; and then *quarter* faced or wheeled to front or rear; as the columns is to be formed. The *column upon the centre*, is the best and most effective of all the formations for *columns of attack*.

To be REDUCED, in a military sense, to be taken off the establishment, to cease to receive pay as soldiers. When a regiment is reduced, the officers are generally put upon half pay. Sometimes the corps are reduced, and the officers remain upon full pay. This happens at the close of a war, when the standing army of the country is confined to a certain number of battalions. Hence is derived the expression, *in* and *out* of the break. *In the break*, is the liability of being reduced; *out of the break*, is the certainty of being kept upon the establishment.

To be reduced *to the ranks*. To be taken from a superior appointment in a regiment, and to be ordered to the duty of a common soldier. This sometimes happens, by way of punishment, when a serjeant or coperal misbehaves himself.

REDUCT. See Redoubt.

REDUCTION *des troupes*, Fr. A reduction of the armed force of a country.

REDUIRE, *Fr.* in drawing, to copy; to reduce, a plan or picture. This operation differs from that of chalking out. The French use the expression in various senses, viz.

Reduire *en grand*, Fr. To copy an original drawing, by giving it larger dimensions.

Reduire *en petit*, Fr. To copy an original drawing, by giving it smaller dimensions, which is literally to reduce it.

Reduire *un plan au petit pied*, Fr. To make a copy of a drawing, in which every part is faithfully represented, though on a small scale.

REDUIT, *Fr.* literally means a nook, or bye-place; in a military sense, it signifies a sort of citadel, which is extremely inconvenient to the inhabitants of the town, because it takes up more ground than those that are regularly built, and is, at the same time, uncomfortable to the troops, because they must be very much crowded. This word is explained by an English lexicographer, in the following manner:—*Reduct or Reduit*, an advantageous piece of ground, intrenched and separated from the rest of the place, camp, &c. for an army, garrison, &c. to retire to in case of surprize. *Reduits* are sometimes made for the purpose of securing different posts in a town independent of its citadel. These have been proposed by the celebrated Vauban.

Reduit, in architecture, a recess.

REED, an arrow.

REEDIFIER, *Fr.* To rebuild.

RE-ENTERING *angle*, in *fortification*, is that which turns its point towa the centre of the place. See FORTIFICATION.

REFAIT, *bois refait et remis à l'equerre*, Fr. An expression used among French carpenters, and by the artificers belonging to the train, to signify any piece of wood which has been planed and made perfectly square and level.

REFEND, *Fr.* in architecture, a partition wall, viz. *Mur de refend.*

To **RE-FORM,** in a military sense, is after some manœuvre or evolution, to bring a line to its natural order, by aligning it on some given point. This frequently occurs in the passage of lines, &c. viz. When a line of several battalions hath passed another that remains posted, by retreating through by files, it may be reformed in the following manner:

To RE-FORM *by a flank battalion, on a central battalion, in an oblique position.*

When by a flank battalion, the line that has passed is fronted in column, and the several pivots are dressed correctly before wheeling up into line. To this effect, the commander of the head battalion will instantly place the pivots of his three first platoons in a true direction, and order the officers of his other platoons to line on them; himself remaining with the head platoon at the point d'appui, will see that this is correctly done. The first battalion thus steadied, will become a sufficient direction for the second, and every other one, to prolong it by their adjutants; and this operation, though successive from platoon to platoon, and from battalion to battalion, may be performed quickly and correctly; if the adjutants are timeously detached, and if the head of the column be quickly arranged.

To RE-FORM *a first line on a central battalion.* In order to give the alignment from a central battalion, after halting and fronting, the platoon pivots of the given battalion are from its head to be accurately lined by its commander, in the true direction. This battalion being placed, from which distances and dressings are taken, the others will instantly proceed to line their pivot flanks upon it: those that are behind it, will readily do this; those that are before it will find more difficulty, as they must take their distances from the rear; to facilitate this necessary object, their platoon officers will face to the directing battalion, and will then successively take their distances and covering from their then front; as soon as each has acquired his true position, he will face about and make his platoon join to and dress to him. The line will then be ready to form, by wheeling up to the pivot flank.

To RE-FORM *a first line, that has passed through a second which remains posted, in an oblique position.*

When it is found necessary that the passing battalions, which constitute the first line should take a new position not paral[illegible] the second, or to their own original formation, the commander, with his two leading platoons, will first enter it (i. e. the new position) and direct the others to regulate their flanks by them; and if several battalions are passing the second line, the *new* alignment is thus made easier for them.

It frequently happens, that a height in the rear is to be crowned by a retiring line. In this case, each officer must not dress exactly to the platoon that precedes him, but in joining it he must *halt*, and arrange his own in such a manner, that the *slope* of the rising or ascent can be entirely seen and commanded, which is here the great object, and would not be attained, if the troops were to adhere to a straight line.

To REFORM, (*Reformer*, Fr.) is likewise to reduce a corps of men, by either disbanding the whole, or only breaking a part, and retaining the rest; or sometimes by incorporating them with other regiments.

REFORME, *Fr.* reduced.

Officier REFORMÉ, *Fr.* An officer put upon half-pay; or *seconded* according to the regulations of the old French service.

REFORMED *officer.* One whose troop or company being broke, is continued on whole or half-pay. He preserves the right of seniority, and continues in the way of preferment.

REFOULER, *Fr* To ram down.

REFOULOIR, *Fr.* A cannon rammer.

REFUGEE, (*Réfugeé*, Fr.) See EMIGRANT.

To **REFUSE.** A military phrase, signifying to throw back, or to keep out of that regular alignment which is formed when troops are upon the point of engaging an enemy. This often occurs in order to occupy a particular position, to prevent the enemy's designs on any particular part of a line, or at least to make him take a greater detour to effect his purpose; or that he may be obliged to align his own on a height which is occupied, and from which he may be flanked. When a first line has passed through a second, and it is found necessary to refuse a wing, the several platoons of that line must pass according to the wing which is to be refused. If the left, for instance, is to be posted, and the right to be refused, the platoons may pass from their left by the facing of the platoon to the left, and marching to the required position in succession; the column will thereby have its left in front, will be more readily directed on the point d'appui, and the preservation of the distances will be facilitated, as they will then be taken from the front. If the right is to be posted, the platoons may pass from their right; but the movement into echellon, and wheeling into line is preferable to any mode, as errors can always be remedied in an instant, and without confusion.

It may happen where the passing line is to post one flank and *refuse* the other, that the officers will have their distances to take from behind; halt the whole at any time after passing, and countermarch each platoon, which will then cause the future formation to be taken from the front of the column.

A retiring line may also *refuse* a wing, by forming in line very soon after passing, and then taking up an oblique position to the rear, by the echellon march, or some other of the modes prescribed. See *Amer. Mil. Lib.*

Frederic, surnamed the great, king of Prussia, who had attentively studied the tactics of the ancients, first adopted the method of refusing a wing in the forming of an attack. This method has been since successfully followed by the best modern generals. It answers to a partial reserve of a force which is always ready at command; and in point of security, it is the reverse of what the French mean in *prêter un aile*, to expose a wing, or post it in a precarious manner. The French during the whole of the action which was fought in Egypt, on the 21st of March, 1801, refused their right wing. Notwithstanding this precaution they were defeated by the British.

As a correct formation of the line by the echellon march, whether it advance or retire in the presence of an enemy, is generally resorted to when it is found necessary to refuse any part of a line, it will not appear superfluous to submit the following mode which is practised by the French.

Formation of the line by the echellon march of divisions, by the covering serjeants or guides running out to mark the point in the new alignment, for their respective divisions.

When the battalion changes position to the front on a fixed flank company, by throwing forward the rest of the battalion, the commander having determined the new line, and wheeled a given company into that line the named number of paces (say 4) the remaining companies wheel two paces on their right forward into echellon. The *guide* or covering serjeant of the second company instantly moves out, takes about 3-4th distance for his company, faces the point d'appui, and places himself in such a manner, that the outside of his right arm will pass in line with the breast of the men of the company already in the line. He is corrected, if necessary, on the distant point of formation by a proper person placed on the right for that purpose. On the words *form line* and *march* being given by the commander, the *guide* or covering serjeant of the third company runs briskly out, places himself so as to cover the second *guide* or serjeant, faces the point d'appui, and takes the order 3-4th distance, corrected on the distant point by the person on the right. The officer commanding the second company, marches on till he sees himself clear of the left flank of the right company; he then gives the word *quarter face to the right*, (his right pivot marking time) and when he observes his company square with the new line, he gives the word *forward*, runs nimbly out and places himself in front of the third left file of the first formed company, and when the men of his company have their feet off the ground ready to finish the last pace to bring them into line, he gives the word *mark time*, and dresses his men close to the outside of the right arm of the covering serjeant: and then gives the word *halt*. Taking care that the outward flank of his company does not shut out the distant point of dressing: he then places himself on the right of his division, covered by his serjeant, who quits his ground and briskly passes through the interval on the right of his division, at the word *halt*.

In this manner division after division arrives in the new line; and as the covering serjeants of each of the other divisions approach within 15 or 20 paces of the line, they run out to mark the points for their respective companies, face the point d'appui as already directed, and there remain till the word *mark time—front—halt*, when the guides quit their places in front and take post on the flank or in the rear.

In forming line to the rear by the echellon march, (suppose on a left company) the same operation takes place with regard to the covering serjeants running out, to mark the points of dressing for their respective divisions; but with this difference, that instead of their taking only about 3-4th distance, they are to take about one pace more or less than the proper distance; face the point of appui, and are corrected on the distant point, as before, by a proper person on the left. The commanders of companies will, as soon as they see the proper front rank of their companies touch that part of the line already formed, give the word *mark time*, *front*, *halt*. Each officer dresses the men of his platoon at the *marked time*, till he brings them in line with the outside of the left arm of his covering serjeant; he then gives the word *halt;* taking post on the right of his company, covered by his serjeant, who quits his ground as before on the word *halt*.

It is to be observed, in order to preserve the proper interval, on the covering serjeant quitting his division to mark the point in the true line, the officer's place is to be immediately filled by a supernumerary or other man from the rear, where he is to remain till replaced by the officer, or covering serjeant.

It is likewise to be observed, that in forming line to the front on a right division, the dressing is close to, and on the outside of the right arm of the covering serjeant; and on forming the line forward on a left company or division, the dressing is close to and on the outside of the left arm. In forming line to the rear on a right division, the dressing is on the right arm: and in forming line to the rear on a left division, the dressing is on the left arm of the covering serjeant.

In forming line to the rear, the officers, or other persons appointed to correct the serjeants on the distant point of formation, move along in the rear and correct the serjeants, as they successively arrive to mark the points for their respective divisions.

By the foregoing method of sending out the covering serjeants or guides to mark the point in the new line for their respective companies, that inaccuracy of dressing, which so often takes place when forming line to the front; and that very great confusion and incorrectness, which too frequently occur when forming to the rear, (particularly so, when the wheel into echellon is in any degree less than the one eighth of the circle or four paces,) are entirely obviated.

REFUSER, *Fr.* For its application in a military sense, see To REFUSE.

REFUSER, *Fr.* This word is used among the French as a sea-phrase, viz. *le vaisseau a refusé.* The ship has missed the wind.

REGAIN, *Fr.* in carpentry and masonry, means the surplus of a piece of stone or wood when it proves too broad or too long for any particular use, and must of course be taken off. It likewise means after-grass or math.

REGALER, *Fr.* to level or make even.

REGIE, *Fr.* government, administration.

REGIMENT, (*Regiment*, Fr.) a term applied to any body of troops, which, if cavalry, consists of one or more squadrons, commanded by a colonel; and, if infantry, of one or more battalions, each commanded in the same manner. The squadrons in cavalry regiments are divided, sometimes into six, and sometimes into eight, nine, or ten troops. The battalions of infantry are generally divided into ten companies. There is not, however, any fixed rule on this head; as both cavalry and infantry regiments differ according to the exigencies of service in time of war, or the principles of economy in time of peace. The German regiments frequently consist of 2000 men: and the regiment of Picardy in the old French service had 6000. The French formerly made a distinction between the commanding officer of a regiment of cavalry, and the commanding officer of a regiment of infantry. The former was stiled *Mestre de camp*, the latter *colonel* as with us; but according to the establishment of the present French army, the term of regiment is confined to the cavalry and artillery: and the name of half brigade is given to the infantry. So that *chief de brigade*, chief of brigade, corresponds with our colonel of a regiment of infantry. The denomination of colonel is again established in the French cavalry.

With respect to the derivation of the word, it appears, that the best etymology is from the French word *Régie*, management, which comes from the Latin *regere*, to govern. Hence a regiment is said to be governed by a colonel. M Beneton, a celebrated French etymologist, differs from this explanation. He traces it from the French *régime*, which signifies system, regimen, administration, and which is again derived from the Latin *regimen*, bearing the same import. In a physical acceptation of the term, *regime* is used to express any body that is composed of several others. But this is mere conjecture on his part.

Regiments were first formed in France in the year 1558, and in England in the year 1660.

Dromedary REGIMENT, a corps raised by the French during their stay in Egypt. The men were mounted upon dromedaries. To quote the words of Mr. Morier, in his account of a campaign with the Ottoman army in 1800, the dromedaries composing this troop are made to go through a number of evolutions, and when attacked, they are formed into a hollow square: they kneel, and by means of a cord which is thrown round one of the knees, they are prevented from getting up, and thus they afford a breast-work for the soldiers. The same author observes in a note, page 59, that the most convenient and only way of travelling in Egypt is upon dromedaries. The traveller need not encumber himself with food for his animal, as a very scanty allowance of beans suffices for many days journey. Travellers ride upon convenient saddles; and the animal is so docile, that he is guided only by touching him with a small stick on the side that he is to turn. Some have a ring through each nostril, which serves as a bit to a bridle fastened to them. They walk very fast; and their trot is swift, but very inconvenient.

Cape REGIMENT. We have already mentioned under the article *Hottentots*, (which see) that a proposal had been delivered in to the British government to raise, train, and discipline a certain number of the original inhabitants of the Cape of Good Hope. This proposal, after considerable delay, and much deliberation, was finally accepted; and a few days previous to the sudden cessation of arms between England and France. Sir John Dalrymple many years ago proposed to the British government the raising of African corps for the subjection of the West and East Indies, and South America.

Malays REGIMENT, a corps which has been raised by the British on the islands and on the coasts of Malacca, for the specific purpose of doing duty in the island of Ceylon.

REGIMENTAL, any thing belonging to a regiment.

REGIMENTAL *staff*. See STAFF.

REGIMENTALS, the uniform clothing of the army; as a leather cap, coat, waistcoat, breeches, stocks, shoes, boots, spats, spatterdashes, &c.

Regimental *courts-martial.* See Courts-Martial.

Regimental *bond.* See Bond.

Regimental *parade.* See Parade.

Regimental, belonging to a regiment.

Regimental *orders.* See Orders.

Regimental *necessaries.* By the British mutiny act, it is declared, that any person, buying, detaining, or exchanging any articles called regimental necessaries, or who shall cause the color of the clothes to be changed, shall forfeit 5*l*. Soldiers selling or exchanging them, are liable to military punishment, &c.

Regimental *receipts for forage on service.* Vouchers which must be produced by the contractors of an army to authorize them to have their claims discharged by the commissary general, or his deputies. It is sensibly observed in page 32 of the British Commissary, that in every case there should, if possible, be only one voucher for one issue. The mode of accomplishing this must be simple, and it is adopted by those who certainly have most experience; for every German corps, or German officer, who draws forage, or any other article, from the commissariat, sends a mere receipt. This prevents farther writing or trouble, because the receipt may be presented in the open field, and is in itself a complete voucher. All that is required, is, for the regiment to order its forage party to bring back the receipt, if the quantity be not obtained; and the quarter-master, or foraging serjeant, to give a receipt for what he gets, if only part can be had.

REGIR, *Fr.* to govern; to manage; to take charge of, viz.

Régir des soldats; to take charge of soldiers.

REGLE, *Fr.* See Rule.

Vent **regle**, *Fr.* a trade wind.

REGALEMEN. See Regulation.

REGRATTER, *Fr.* in architecture, to scrape the outside of a building.

Among engravers this word signifies to re-touch a plate.

REGULAR. In geometry, a *regular* body is a solid, whose surface is composed of regular and equal figures, and whose solid angles are all equal.

REGULAR *attacks*, in a *siege*, are such as are made in form; that is, by regular approaches. See Attacks.

Regular, when applied to the army, signifies those troops that are inlisted for a regular period, do duty as soldiers and nothing else; contradistinguished from those who are citizens occasionally exercising the duties of soldiers; thus the militia are not ranked among the regulars, unless on actual service and well disciplined, and fit for any service. Hence regular troops, or regulars.

REGULARS, (*Troupes Régulieres*, Fr.) Those troops whose conditions of enrollment are not limited to time or place, in contradistinction to fencibles, militia, or volunteer corps; called also *the line*.

To **REGULATE**, to adjust by rule or method.

Regulating *Battalion.* See Parallelism of a March.

REGULATION, the act of regulating, or adjusting by rule or method.

Regulation, a term generally used in the British army to signify the regulated price at which any commission, or saleable warrant is permitted to be disposed of. These prices have been fixed by the king. For particulars see Military Finance, page 160.

REGULATIONS, *for the American army.*

There is no coherent or consistent system of regulations in existence for the military establishment of the United States. The economy of military arrangement is as essential as the discipline of the field, to assure the effects of military operations. There should be a well digested system of regulations, and upon that system should be engrafted a staff, susceptible of adaptation to the peace or the war establishment, to the smallest or the largest force. The French have derived the greatest advantage from their regulations, which have been formed by a well digested body of principles adapted to all circumstances, and the enforcement and execution of which is always distinctly appropriated to the proper officers of the staff. At present the regulations of the United States army is confined to a few general orders from the war department, on detached points of service; and of occasional orders of the commander in chief, issued upon some exigency, at remote periods; and adopted into permanent use. In many instances these regulations have been altered by the war office, in others the circumstances which gave rise to them have ceased, and the regulations become obsolete or inappropriate. In 1810, an attempt was made, by the establishment of a quarter-master general's office, to commence something like a system; should this be accomplished it may be beneficial, though the want of information in the duties of a staff, particularly if those heretofore arranged under the quarter-master general's department alone are to be adopted, that it is to be feared the system may remain defective, should the old English model, now exploded by the British themselves, be kept in view instead of the more enlarged system introduced in modern wars. The treatise on the staff by *Grimoard*, contains the best body of regulations extant. It has been translated, and will form a part of the American Military Library.

The following are among the principal regulations in force at the beginning of the year 1810.

(General Orders.)

Head Quarters,

Fort Washington, May 22, '97.

To prevent the necessity of repetition

to establish principle, without which there can be no permanent order, to define the rights of individuals, to exclude caprice, to promote economy, and precision, to disseminate an uniformity of duty and of service throughout the army, and to impress the necessary ideas of subordination and discipline, the following regulations have been digested, and must be duly respected by all ranks.

I. Precedence in command is attached to seniority of corps, and the oldest commission subject to such deviations as the commander in chief may deem essential to the national weal, and the point of honor is determined by the following gradation.

1. Guard of the president.
2. The attack.
3. Reconnoitring parties, and corps of observations.
4. Foraging before the enemy.
5. Posts in the enemy's country.
6. National barriers.
7. Detachments and out posts.
8. Guard of the trenches.
9. Van guards to the front.
10. Rear guards in retreat.
11. General courts-martial.
12. Guard of the commander in chief.
13. Guards of camp or garrison taken from the line.
14. All other guards mounted from the grand parade.
15. Guards of general officers, and the staff according to rank.
16. Pickets.
17. General fatigues.
18. Regimenral police.

Should a tour of service occur while an officer is on any subordinate duty, he shall be relieved, but the tour on which he was engaged shall pass to his credit. If an officer's tour for general court-martial, picket, or fatigue, occurs while he is on any other duty from the grand parade, he shall not be relieved, but is to stand for the next tour.

II. In all services by detachment, the corps are to furnish according to their strength, the longest off the first on; but in all cases of duty and of service where it may be found practicable, the troops are to operate by companies, battalions, or regiments.

III. Marching off the grand parade, or swearing in on general court-martial, is to pass for a tour of duty.

IV. Return detachments not to be excused from duty more than two days.

V. Police in conformity to the regulations of Baron de Stuben.

VI. Fatigues, general or particular, to be regulated by detail, and duty of every kind to be apportioned impartially.

A soldier, by voluntary compact, becomes the servant of the state, but not the slave of any individual. Extra men are never to be drawn from the ranks, but by permission of the commanding officer district, department, or regiment; and when employed in the service of officers, they are to be paid one third of a dollar per day, by the individual for whom they work. To abstract a soldier from his professional duties, and to subject him to the orders of persons not attached to the army, or to impose upon him menial laborious services, is an abuse of authority, a breach of contract, and a deep injury to the service; because it authorizes negligence in the soldier, and in effect destroys his arms and clothes. This practice is therefore positively prohibited.

VII. The annual clothing should be issued in the following manner.

In the Southern States.

On the first day of December, woollen overalls and vests, two shirts, two pair shoes, and two pair socks.

On the first day of April, the residue.

In the middle and Eastern States.

On the first day of November, woollen overalls and vests, two shirts, two pair shoes, and two pair socks.

On the first day of May, the residue.

Where circumstances will permit, it is to be drawn by the paymasters of corps, under the orders of the commanding officers, upon returns certified by the captains, or officers commanding companies, who are to receive it, and are to be held responsible for the distribution; extraordinary arrangements will be applied to extraordinary cases.

VIII. Company books and papers belong to the company, and are never to be separated from it, therefore whenever an officer is taken from his company, by promotion, transfer, or leave of absence, he is to deposit all the books and papers belonging to it, with the officer next of rank, taking duplicate receipts for the same, one of which is to be lodged with the paymaster of his corps; and whenever a man is transferred or ordered upon distant service, the commanding officer of the company from which he is taken, will be held responsible, that the date of his inlistment and a state of his accounts, as to pay, clothing, arms, ammunition, and accoutrements, be transmitted to the commanding officer of the corps, garrison, or detachment, which he is to join: certificates of provision are always to accompany individual soldiers and non-commissioned officers commands, from post to post.

IX. Servants to be taken by voluntary consent from the regiment, corps, or detachment, to which the officer served may belong, in the following proportions, viz.

A lieutenant colonel commandant on duty, three, one without arms.

Major on duty, two, one without arms.

Captain commanding a post or battalion, two, one without arms.

Captain on ordinary duty, one with arms.

Subaltern on duty, one with arms.

Surgeon on duty, two do.

Surgeon's mate, one do.

Quarter-master general with the army, two, one without arms.

Paymaster general two, one without arms.

Subordinate staff, at the discretion of the commanding officer.

The servants of platoon officers are always to acompany them on duty, and will be included in the same detail: no officer on furlough can be allowed more than one servant, and him without arms.

This allowance is a liberal one, and but too sensibly impairs the strength of the line. If gentlemen will mess, as in all other armies, it will be found abundant; otherwise they must employ domestics to be fed, paid, and clothed from their privy purses, as no further indulgence on the part of the public can be admitted.

The commanding officers of corps; posts, and detachments, will be held responsible for the strict observance of this order, and the violation by whomsoever permitted or committed, will be followed by an arrest, and the sentence of a general court-martial.

X. Four women per company complete, and in that ratio, are permitted to draw provisions and no more; washing the clothes of the company is to be performed by these women, at such price as the commanding officer of the regiment may establish; the officer commanding the company will be held responsible that it is fairly and impartially distributed, rating an officer as four men; mistresses or kept women are prohibited to the officers—the habit is a vicious one, it is repugnant to the rules of society, it is burthensome to the service, ever pregnant with discord, often afflictive to the meritorious soldier, always disgraceful, and frequently destructive to men of merit; the ceremony of marriage heretofore performed by the officers of the army, is also strictly forbid.

XI. Discharges for services fully performed to be given by the commandants of regiments, upon the certificate of the captain or commanding officer of the company in which the soldier served; but in all other cases by the commander in chief, or superior authority—retiring officers are not to take off soldiers with them as waiters or in any other capacity; a contrary practice has lost many valuable men to the service, and has perplexed the company accounts.

XII. The power of granting furloughs is in the commander in chief, on the recommendation of the colonel or officer immediately commanding the applicant, unless where the authority of the president is interposed.

XIII. Suttling is restricted to the permission of the commander in chief, or officer commanding a separate department, but no permission is to be granted, except to citizens of the United States of known probity, and attachment to the government.

XIV. As we have no chaplain, the troops are to be inspected by companies every Sunday, and by regiments, battalions, or detatchments, monthly; when returns of inspection are to be made out agreeably to the established form, these returns are to be regularly transmitted to the commander in chief, under the certificate of the commanding officers of companies, and the inspecting officer, who in the absence of the inspector, is to be appointed by the commanding officers of corps, posts, or detachments.

XV. The appointment of adjutants and quarter-masters of corps, hertofore in the commander in chief, appertains of right to the lieutenant colonels commandant, who have the power of removal from office. The regimental paymaster is elective by the officers of the regiment, under the orders of the colonel.

XVI. The appointment of non-commissioned officers, held of great importance in all services, because it is the root of all subordination and discipline, has been much neglected in ours. More circumspection on this interesting point is strictly enjoined, the captain or commanding officers of companies may recommend, but the appointment is in the colonel or commanding officer of the corps only.

XVII. Reformation being the end of all punishments, a soldier is never to be punished when drunk, but when found in that disgraceful situation, he is to be confined until he recover his senses, and is then to be punished.

XIII The residence of the regimental staff is at the head quarters of the regiment, except the surgeons mates, who are subject to be detached.

XIX. Stoppages of pay are to be rigorously enforced for lost arms, ammunition, accoutrements, and clothing, which cannot be satisfactorily accounted for, it therefore becomes indispensible that company and regimental books, as well as those of the paymaster and quarter-master, should be kept with great exactness, and that councils of administration should sit quarterly whenever practicable, to scrutinize the regimental accounts.

XX. Garrisons of posts are not to be varied, except by the officer who establishes them, or his superior, but subordinate officers commanding posts in the department, are to report monthly to the head quarters of the regiment to which they belong.

XXI. Commanding officers of posts, under the grade of field officers, are to be relieved annually, and majors biennially, this rotation is founded in the principles of justice and sound policy.

XXII. The use of cards and dice are strictly prohibited in camp or quarters, except for the game of backgammon.

XXIII. In military institutions the force of example is incalculable, no officer, therefore, off duty, can be excused from parades, regimental or general, except in case of actual sickness or confinement; the officer who feigns sickness to elude duty, is a dishonor to his cloth, and will be held in infamy: and should any officer or non-commissioned officer, (be his command ever so diminutive,) betray such indolence and insensibility of professional obligation, as to omit one regular roll call, he shall be made an example to the army.

These orders are to be read to the troops, on the first day of the months of January, April, July, and October.

(Extract of General Orders.)

Head Quarters,

Loramiers, June 12, 1797.

To correct and extinguish the abuses which have crept into the service, is an herculean task, yet the commander in chief owes it to his own honor, to the honor of the army, and to his country, to effect a reform, and he calls upon his officers of every grade, for their co-operation in the arduous undertaking.

The spirit of cropping,* which is almost every where to be seen, is repugnant to the principles of soldiership, destructive to the service, and disgraceful to those who indulge it; not less exceptionable is the practice of collecting and breeding live stock in large quantities.

The highest obligations of a soldier are briefly comprised to be ever ready to march, to fight, and to die, but the principles and condition of the former are at utter variance with this solemn text; gentlemen in commission must reflect, that it is to them the private looks for example; the national bounty is expended not to improve the agricultural arts, but to instruct men in the use of arms; the hoe and plough must be laid aside, and every moment from professional duty, devoted to form, instruct, and to train them in the glorious science of war. It is for this noble purpose gentlemen receive the pay and subsistence of their country, and their honor is pledged for the performance.

Planting and improving of corn fields is prohibited; gardens, sufficient for the accommodation of officers and soldiers, are proper and necessary, and it is obligatory on all commanding officers to pay attention to this subject, the labor is however to be done by detail; the idea of an officer's farming for profit is inadmissible, as it tends to a neglect of duty, a relaxation of discipline, abuse of the public service, and the disgrace of the profession.

In marching from one post of the continent to another, it is repugnant to every principle of economy and of justice, that the public should transport private provisions (other than groceries) or household furniture; if one officer is indulged in this way, another is equally intitled to indulgence, what a spectacle should we behold was every officer to move, with all the baggage and stock accumulated at the several posts, we should look more like a horde of Tartars than a regular military corps; while such practices prevail the public service will be embarrassed and delayed, and in effect exposed to destructive consequences, they are therefore prohibited.

(Extract of General Orders.)

Head Quarters,

South West Point, September 1, 1801.

Besides the rolls of muster directed to be furnished to the pay department, one roll of each company or detachment of the army, and of the regimental staff for the months of June and December annually, are to be transmitted to the inspector of the army, at the city of Washington, on the first of January, and the first day of July following such musters, in the same manner that inspection and other returns are directed to be transmitted to him by the order of the 30th of November last; for the strict observance of which all commanding officers will be held responsible.

(General Orders.)

Head Quarters,

Washington, July 9, 1804.

The opinion having prevailed that an officer may throw up his commission and abandon the service at his discretion, the general considers it his duty to correct a delusion so pregnant with mischief to the public interest, and so subversive of every principle of subordination and discipline; it is therefore to be clearly understood that no officer, bearing a commission in the United States, has the power to resign the same, or quit the service without the president's permission, or that of some subordinate duly authorized, and all offences against this order are to be punished with rigor.

(Extract of General Order's.)

Head Quarters,

Natchitoches, Sept. 24, 1806.

To recover lost ground, and to revive the languishing principle of subordination, it is essential this little corps should recollect the rights and attributes of rank and commission; agreeably, therefore, to a standing rule, which can never be dispensed with, without prejudice to the service.

The general can hold no communication on a professional topic, except in cases of public or personal grievances, but through the commandant of the post; or commanding officers of corps, nor can these gentlemen receive any similar application from their subalterns, but through their respective captains.

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* This term refers to a practice which found its way into the army, in the western cantonments, who had employed the soldiery in raising crops of produce to the neglect of discipline.

(Extract of General Orders.)

Head Quarters,

New Orleans, *January* 22, 1807.

It is deemed unnecessary to muster the troops every month, since it rarely happens that a payment is made for so short a period: the general therefore directs that in future the several companies be mustered on the last day of Feburary, April, June, August, October, and December, and that each muster, comprise the casualties of two months.

(Extract of General Orders.)

Head Quarters,

New Orleans, *March* 31, 1807.

The following regulations are to be considered of standing import, and are to be punctually observed until revoked.

All commanding officers are in person to command the daily parades of their respective garrisons, unless prevented by indisposition.

The troops are to be exercised once a week in battalion, and by companies twice a week when the weather may permit, without prejudice to the arms or the health of the men.

Whenever a superior officer shall visit a post or garrison, it is the duty of the commanding officer immediately to wait upon him, and make a tender of the keys, returns, reports, regulations, and instructions relative to the said post or garrison, and receive his orders.

Quarter guards are not permitted in garrison, nor are guards of quarters allowed, except to the commanding officer, and those who are entitled to them by established regulation.

The guards are invariably to be exercised by the officer of the day, when the weather may permit, before they are marched off the grand parade for their posts.

Awkward recruits are to be drilled daily until perfected in the elements of their profession.

(General Orders.)

Head Quarters,

New Orleans, *April* 15, 1807.

In all cases where men are discharged, the full complement of clothing to which they are intitled by law, is to be paid up out of the company stock.

Inspector's Office,

Washington, *January* 21, 1810.

The foregoing are true copies from the orderly books in this office.

A. Y. NICOLL,
Adjutant and Inspector.

BY THE DEPARTMENT OF WAR.

Regulations *to be observed in the allowances for barracks or quarters to the officers of the army, and in the delivery and distribution of fuel and straw to the garrisons on the sea coast and recruiting parties.*

Barracks or Quarters.

To the commanding general, for himself, four rooms and a kitchen.

To his aid, one room.

To the quarter-master general, three rooms and a kitchen, and two rooms for offices and clerks.

To each field officer, two rooms.

To the inspector of the army, one room in addition to his allowance as a field officer.

To each captain, one room.

To each of the regimental staff, one room.

To a field officer, or a captain, when commanding a separate post, in addition, a kitchen.

To two subalterns, one room.

To every mess of eight officers, one room and a kitchen.

Fuel.

From the first day of October to the first day of April, in each year.

To the commanding general, two cords and one half of wood per month.

To the quarter-master general, two cords per month.

To the inspector of the army, two cords per month.

To each field officer, one and an half cord per month.

To every commanding officer of a garrison, one and an half cord per month.

To every officer commanding a recruiting party, one cord per month.

To every other commissioned officer, one cord per month.

To every room occupied as barracks by eight non-commissioned officers, musicians and privates, one cord per month.

To a garrison barrack guard, half a cord per month.

To officers and soldiers half of the aforesaid allowances of fuel from the first day of April until the first day of October in every year, but none for offices.

To the sick in hospital, the allowance of wood is to be regulated by the surgeon.

The commanding general, under special circumstances, may by orders in writing, enlarge or diminish the foregoing allowances of fuel, and may by the like orders, direct or withhold allowances of fuel or straw at such other posts as he may judge expedient, in cases not provided for by any special regulation.

No compensation in money to be made in lieu of allowances of fuel, nor is any compensation to be received by or paid to officers, in lieu of quarters or barracks.

Straw.

1. One truss of straw weighing thirty six pounds, is allowed for each palliass for two men. At the expiration of sixteen days, each palliass is to be refreshed with

eight pounds. At the expiration of thirty two days, the whole straw is to be removed, and a fresh bedding of one truss to be furnished, and so on, every succeeding period of sixteen and thirty two days.

2. The same quantity of straw is allowed for servants or batmen not soldiers, and for washer-women attached to each company in the proportion of one washer-women to every seventeen non-commissioned officers and privates.

3. The straw is to be changed for the sick in the hospital as often as may be deemed necessary: this necessity to be determined by the surgeon, or surgeon's mate, in the absence of the surgeon.

Requisitions for Fuel or Straw.

1. Requisitions for wood or straw, must state the number and rank of the officers; the number of non-commissioned officers, and privates, servants and batmen not soldiers, and of washer-women for whom demanded, and be certified by the commandant of the garrison, or recruiting party.

2. No wood or straw shall be drawn for officers, or wood or straw for soldiers, whilst on furlough, or any allowance made to them for the same.

3. Whenever it shall appear that more wood or straw has been drawn than there were officers, soldiers, servants or batmen not soldiers, and washer-women actually present and entitled thereto; the commanding officer signing such requisition, shall be held responsible for the value of the article drawn beyond the quantity allowed by these regulations, and shall have his name and the circumstances of the case, reported to the secretary for the department of war.

4. Requisitions thus signed, and the receipts given by the officers, to whom the articles are delivered for consumption, shall be produced as vouchers by the contractor, agent, or quarter-master, in the settlement of his accounts.

As a smaller quantity of fuel may suffice for the garrisons and recruiting parties to the southward than ordered by these regulations, their commandants are enjoined to regulate the demands for this article by the nature of the climate.

Given at the war office of the United States in the city of Washington, this twenty eighth day of April, A. D. 1801.

HENRY DEARBORN,
Secretary of War.

Additional regulations relative to fuel.

At all posts, garrisons, or recruiting rendezvous, to the northward of the 39th degree of north latitude, should be allowed in addition to the present allowance of wood, from the first day of October, to the first day of April in each year;

To each field officer, half a cord per month.

To every commanding officer, of a garrison, consisting of one company, half a cord per month.

To every other commissioned officer, one third of a cord per month.

To every room occupied by eight men, half a cord per month.

To a garrison or quarter guard, half a cord per month.

May 1, 1806.

REGULATIONS *respecting certain supplies and objects of special and extra expense.*

The several contractors, besides rations including ardent spirits and vinegar, shall only provide and furnish *quarters, transportation, forage, fuel, straw, and stationery,* to recruiting parties where there is no appropriate officer of the quarter-master general's department to furnish the same. The quarters intended, are those of a temporary kind. The power to provide them shall not extend to the building or repairing of barracks. In what they furnish, they shall govern themselves *exclusively* by the regulations which have been established by law or by the war department, and in cases to which no regulations apply, by the orders of the particular commanding officer.

No repairs shall be made to any barracks or buildings which shall incur a disbursement of money exceeding fifty dollars, but by an order of the secretary of war.

As often as any matter which may require any special or extra expense can wait without material injury to the service, for a communication to, and the direction of the secretary of war, or the commander of the army; it is not to be undertaken till after such communication and direction shall have been had.

The quarter-master general, his deputies and assistants, are primarily charged with making the disbursements in the cases abovementioned. When there is no such officer, the agent of the war department in the vicinity shall do it. All orders for such disbursements must be definite and in writing, to be transmitted with the accounts of them to the accountant of the war department; and all disbursements made in pursuance of these regulations must be substantiated by such vouchers as shall be prescribed by the said accountant.

Given at the war office of the United States in the city of Washington, this twenty eighth day of April, A. D. 1801.

HENRY DEARBORN,
Secretary of War.

Rules adopted by the president of the United States relative to promotions in the army

Promotions in the army of the United States, shall hereafter be made agreeably to the regulations in force previous to those of the 3d of September 1799, which were promulgated in general orders, dated the ninth of that month.

Promotions to the rank of captain shall be made regimentally, and to the rank of major and lieutenant colonel in the lines of the artillery and infantry respectively.

The officer next in rank, will, on the happening of a vacancy, be considered, in ordinary cases, as the proper person to fill the same; but this rule may be subject to exceptions in extraordinary cases.

Given at the war office of the United States, this twenty sixth day of May, A. D. 1801, *and of independence the twenty fifth.*

HENRY DEARBORN,
Secretary of War.

The above rules for promotion in the infantry and artillery, are applicable to the cavalry and riflemen.

No officer will consider himself as filling a vacancy until he receives notice thereof through the department of war.

H. DEARBORN.

March 7, 1808.

Regulations respecting salutes.

Salutes from the forts in the several ports and harbors of the United States shall, as a general rule, be of sixteen discharges from guns of a calibre not exceeding nine or twelve pounders.

No salute shall be fired to foreign ships or vessels of war, but in return; and in every such case, their salute shall be returned gun for gun.

Each military post within the United States may fire a national salute on the morning of the fourth of July, annually; and when there shall be a collection of citizens at, or within the immediate vicinity of a military post for the purpose of celebrating the anniversary of American independence, sixteen guns may be fired in the course of the feast.

A national salute shall be fired on a visit to the post from the president or vice president of the United States, or the governor of the state in which the post may be.

A gun not exceeding a six pounder, should be fired daily at reveille beating, immediately after the break of day; after which, no officer or soldier should remain in bed.

Given at the war office of the United States in the city of Washington, this tenth day of June, A. D. 1801, *and in the twenty-fifth year of American independence.*

(Signed) HENRY DEARBORN,
Secretary of war.

REGULATIONS *respecting extra pay, and allowance of soldiers, when ordered on constant labor, for a term not less than 40 days.*

The non-commissioned officers and privates of the artillery or infantry who may be drawn as artificers, to work constantly on fortifications or bridges, for a term not less than 40 days, Sundays excepted, shall be allowed, for each day's actual labor, fourteen cents, and one gill of spirits each, in addition to their pay and rations, and one pair of linen overalls, and one frock; and if they shall be continued at work for 120 days, Sundays excepted, they shall each be allowed an additional frock, and an additional pair of overalls.

Other non-commissioned officers and privates, not artificers, who shall be drawn from the artillery and infantry for constant labor on fortifications, roads, or bridges, for a term not less than 40 days, Sundays excepted, shall be allowed for each day's actual labor, ten cents and one gill of spirits each, in addition to their pay and rations; and if they shall be continued at work for 120 days, an additional frock and pair of overalls in like manner as the artificers.

It shall be the duty of the officer commanding any such working party, to have a regular account, kept under his inspection of every day's work performed by each non-commissioned officer or private, signed by the commanding officer, and to transmit monthly a fair abstract thereof to the paymaster of the district in which the labor may be performed, which paymaster will be authorised to draw the money on the said abstracts, and pay the men conformably therewith.

It is to be understood, that the extra daily pay and allowance, is only to be given for actual day's work, and not to be granted, when from sickness or other causes, the work shall not actually be performed.

(Signed) H. DEARBORN,
Secretary of war.

War department, June 25, 1801.

The above regulations, so far as they respect allowances of extra clothing, are considered as being superseded by the act fixing the military peace establishment, which grants fatigue clothing to all the non-commissioned officers, musicians, and privates of that establishment, annually.

H. DEARBORN.

March 7, 1808.

The following rates are to govern in the allowance to officers for the transportation of their baggage, when ordered on distant commands.

A colonel	750 pounds.
Lieut. colonel,	600
Major,	500
Captain,	400
First lieutenant,	300
Second do.	250
Ensign,	250
Surgeon,	500
Surgeon's mate,	300

Each officer to be allowed the usual and customary prices of transportation by land or water per hundred, on the route which shall be necessary for him to transport himself and baggage, for as many hundred as he is entitled to the transportation of, by the regulations hereto annexed. An average price by land, will not exceed two dollars per hundred for 100 miles, and by water there are but few cases where a certain rate per cwt. is not known.

(Signed) H DEARBORN.

War department, June 23, 1801.

In addition to the foregoing regulations, there shall be allowed to each officer, when ordered on general courts-martial, at the rate of three dollars for every hundred miles, for the transportation of his baggage.

(Signed) H. D.

Ordinance, regulating and ascertaining the quantity of stationery which each officer, serving in the army of the United States, shall be entitled to receive annually.

To every officer commanding a separate post, the garrison of which shall consist of, from one to two companies, twenty-quires of writing paper.

To every officer commanding a separate post, the garrison of which shall consist of, from three to five companies, thirty-six quires of writing paper.

To every officer commanding a separate post, one blank book containing two quires of paper.

For the use of the garrison of every separate post, ingredients sufficient to make two quarts of ink.

For the use of the garrison of every separate post, twenty dozen of wafers.

For the use of the assistant military agent, at every separate post, one blank book containing two quires of paper.

For the use of every military company, whether in garrison or otherwise, two quires of paper, and one blank book containing the same quantity.

For the use of every other commissioned officer in the army, two quires of letter paper, with a proportionate allowance of ink, quills, and wafers.

Done at the war office of the U. States, this 25th day of February, 1802.

H. DEARBORN,

Secretary of war.

Regulations relative to the employment of physicians.

In future, no surgeon, surgeon's mate, or physician, not holding an appointment in the army of the United States, is to be employed on public account, by any officer or other person whatever to act in the capacity of surgeon or physician, for any man or men attached to the army, unless by special agreement first entered into, in which the compensation for medical service to be performed, shall be stipulated in writing, either by the day or month.

When the services required shall be such, as not to exceed the usual duties of a surgeon's mate, the compensation per month, should not exceed the pay and emoluments of a surgeon's mate.

For any number of men, not exceeding twenty, the compensation should not exceed the rate of two hundred dollars a year, including medicine; and for any number of men, not exceeding thirty, the compensation should not exceed the rate of three hundred dollars a year, including medicine.

In no instance, extraordinary cases excepted, should the compensation for medical assistance, for a shorter period than one month, exceed the rate of four dollars per day, exclusive of medicine.

Charges for medical services, after the promulgation of these regulations, will require certificates, of their having been performed agreeable thereto.

April 2, 1806.

Regulations relative to returns of clothing.

It shall be the duty of the commanding officers of companies, to make out in December each year. correct returns of the clothing necessary for their respective companies for the succeeding year, including what is on hand fit for service; also correct returns of all clothing on hand, noting such as is fit for use: the said returns to be forwarded annually, by the 1st day of January, to the department of war, through the commanding officer of the military post, garrison, or encampment, at which the officer making the returns is stationed. The commanding officers of companies, shall be responsible for the correctness of their respective returns.

War department, Dec. 1, 1807.

REGULATIONS *to be observed by officers commanding detachments of the army to be embarked, and on ship board.*

I. The officer commanding the embarkation, prior to the men's going on board, must personally inspect the transports, to ascertain that the quantity of provisions assigned, and every necessary accommodation is provided.

II. As soon as the troops are on board, an officer from each company will personally see, that the arms and accoutrements, the clothing neatly packed in the knapsacks, together with the hats, are to be placed in order, and properly secured, over their respective births, on the racks and pins ordered for the purpose: the arms are all to be provided with cloth tompkins; they are to be oiled, and handled daily, during the voyage, and are to be frequently inspected by the officers, to prevent their being injured by rust.

III. The men must be allotted to births, in the order in which they roll in their companies, and are to be divided into messes by squads, with a non-commissioned officer at the head of each, who is to be responsible for the good order and cleanliness of it; particular attention must be paid to the cooking, for which purpose two men must be detailed weekly from the company to attend to this duty, and it is essential that every other soldier should be prohibited from going to the camboose.

IV. An officer of the day will be appointed, whose duty it will be to enforce regularity, cleanliness and order amongst the men; to see that their provisions are well cooked and equally distributed; and in case of neglect, in any instance, he must immediately report the circumstance to the officer commanding, who will chastise the offender, if necessary.

V. The men must not be permitted to go below during the day, except in case of indisposition, or bad weather; and the bedding must invariably be brought on deck every morning, if not prevented by rain, and taken down always before sun set.

VI. To prevent accidents by fire, no candles must be suffered below, but in lanterns, and smoking between decks must be on no account, permitted. All lights are to be extinguished at eight o'clock; and the officers, to set an example of good order, should not indulge themselves in sitting up beyond a reasonable hour.

VII. General parades and calls of the roll are to be had at troop and retreat, with arms and accoutrements, in good weather, and without in bad; and on every Saturday, the commanding officer must make a complete inspection of arms, accoutrements and clothing.

VIII. To ensure cleanliness, the men must be compelled to wash their heads and hands every morning, and their feet every evening.

IX. A serjeant's guard must be mounted daily, and a sufficient number of sentries posted, to enforce these regulations; and particularly one or more at the necessary, camboose and hatchways, with their side arms.

X. In case of coming to anchor, care must be taken to prevent the men having any communication with the shore; and attention must be paid to prevent their purchasing liquor or green fruit, from boats coming along side.

XI. The commanding officer is to cooperate with the master of the transport, in whatever may be necessary to promote the voyage; and in approaching a sail, he is positively forbid shewing a single soldier on deck: the sentries are in such case to be removed below.

XII. The men are to be furnished with two flints; twenty four rounds of ball cartridges, each: six in their cartridge boxes, and the residue packed in kegs.

These regulations are to be strictly observed in every particular; and any officer who may violate them, by omission or commission, will be brought before a general court-martial.

Given at Head Quarters, city of Washington, Dec. 15, 1808.

This closes the whole body of Regulations for the United States force, as far as the American editor has been able to collect them.

To buy or sell at the REGULATION, to give or receive no more for a commission than what has been settled by the king's authority in the British service. When an officer is allowed to retire from a regiment with permission to sell, the one next for purchase is supposed to pay the regulation price of his commission; but it frequently happens that parties agree among themselves with respect to terms; and it sometimes occurs, that young men of interest and fortune stop the regular promotions of officers by overbidding the market. This traffic, so infamous in its principle, as well as in its abuses, was exhibited in an odious light in the case of the duke of York and his courtesans in 1809.

Cavalry REGULATIONS, specific instructions for the formations and movements of cavalry.

Infantry REGULATIONS. A system of tactics for infantry. The general principles for the formations and movements of cavalry and infantry being invariably the same, their more particular explanation in several points, is to be found in the regulations for the infantry. See *American Military Library*.

General REGULATIONS *and orders.* A collection of certain general rules which were published for the British army by authority on the 20th of August, 1799, and which are to be considered as the ground work of those instructions that generals commanding districts, and officers in the command of brigades and regiments, forts or garrisons, may find it necessary to issue to the troops under their respective commands. To use the words of the adjutant general, this publication does by no means comprehend the whole detail which the various duties and services, and the interior economy and management of regiments may require. They are principally extracted from a book, intituled *The Rudiments of War*, which was published by N. Conant in 1777, they are directed to be considered as the *standing* orders of the army at large. They cannot be altered, or in any sense be deviated from, without the king's or commander in chief's approbation. It is however to be observed, that a book manifestly calculated for the interior management of the army, and consequently a necessary companion to the rules and regulations, should have been more specific. Many circumstances, apparently insignificant in themselves, and, of course, unnoticed at head quarters, grow into objects of serious discussion among the different regiments of the service, both at home and abroad. It is an old maxim, that he who neglects small faults will soon fall into great offences.

RE-IMBODY. To re-imbody, is to imbody again any regiment or corps that has been disbanded. Thus, the English militia is disbanded, and partially re-imbodied for 28 days in every year during peace.

REIN, that part of a bridle which extends from the head of a horse to the hands of the rider, &c.

REINFORCE, in *founding guns*, that part of a gun next to the breech, which is made stronger than the rest of the piece, in order to resist the force of the powder. There are generally two in each piece, called the first and second reinforce: the second is something smaller than the first, upon the supposition that when the powder is inflamed, and occupies a greater space, its force is diminished, which is not the case. See CANNON.

REINFORCE *ring*. There are three in each gun, called the first, second, and third: they are flat mouldings, like flat iron hoops, placed at the breech end of the first and second reinforce, projecting from the rest of the metal by about 1-4 of an inch.

REINFORCEMENT *to the army*, is an addition of fresh troops to strengthen an army, in order to enable it to go on with an enterprise, &c.

To REJOIN. To meet again. To return. He left his regiment when it broke up camp, but rejoined it again before the army marched into the enemy's country.

REJOUISSANCES *publiques*, Fr. Public rejoicings, or thanksgivings. Chevalier Folard makes a curious and interesting comment relative to this subject, in one of his notes upon Polybius. He therein asserts, that the *Te Deum*, or thanksgiving to God, was as much practised among the heathens as it is among the moderns.

REITRES, *Fr.* a body of armed horsemen, who came out of Germany, and entered into the French service during the reign of Henry III. They were incorporated with the carabineers.

RELAYER, *Fr.* to relieve; to lessen the labor of any particular set of men by occasionally sending fresh workmen.

RELAIS, *Fr.* a term used in fortification to signify a space, containing some feet in breadth, which is between the foot of the rampart and the scarp of the fosse. It serves as a convenient receptacle for the earth that occasionally crumbles off.

RELAY *horses*, in the *artillery*, are spare horses that march with the artillery and baggage, ready to relieve others, or to assist in getting up a hill, or through bad roads, &c.

RELEASE. The commanding officer alone has the prerogative of releasing a prisoner from confinement, after he has once been duly given in charge to the guard, with his crime or crimes stated in writing; or of remitting after he has been adjudged to suffer military punishment; except in cases of a general court-martial, when the general of the district in certain cases, and the president of the United States in higher cases, can remit or mitigate.

Cheval de RELAIS, *Fr.* a hackney horse.

RELEVEE, *Fr.* The afternoon.

RELEVER, *Fr.* to relieve. Hence,

RELEVER *une sentinelle*, Fr. To relieve a sentry, by posting another soldier in his room.

RELEVER *la garde*, Fr. To relieve guard.

RELIEF, *Fr* an order, given by the minister at war, to authorize an officer to receive the arrears of pay which had accumulated during his absence from the regiment.

RELIEF, *Fr.* In architecture means the same as the term does when used in English.

RELIEN, *Fr.* The broken grains of gunpowder which have not passed through the sieve.

To RELIEVE *the guard*, is to put fresh men upon guard, which is generally done every 24 hours.

To RELIEVE *the trenches*, is to relieve the guard of the trenches, by appointing those for that duty, who have not been there before, or whose turn is next.

To RELIEVE *the sentries*, is to put fresh men upon that duty from the guard, which is generally done every two hours, by a corporal who attends the relief, to see the proper orders are delivered to the soldier who relieves.

RELIEVER, an iron ring fixed to a handle by means of a socket, so as to be at right angles to it: it serves to disengage the searcher of a gun, when one of its points is retained in a hole, and cannnot be got out otherwise See SEARCHER.

A REMAIN, a term used among storekeepers belonging to the board of ordnance, &c. to express the actual quantity of stores which is found at an outport, &c. when a new store-keeper is appointed.

REMAINS of stores are ordered to be taken at all places at home, once in seven years, as also at the expiration of a war. In foreign parts a *remain* is taken only on the appointment of a new store-keeper. See OFFICE OF ORDNANCE, or BOARD OF ORDNANCE.

To REMAND, to send back; as when a soldier who has been brought out of prison, or the guard-house, for the purpose of being examined or tried, is sent back without any thing final occurring relative to his case.

To REMARK, to take note of any thing.

REMARKS. Army returns, regimental statements, guard reports, &c. have a column allotted for remarks and observations relative to extraordinary occurrences.

REMBLAI, *Fr.* Earth collected together for the purpose of making a bank way, &c.

REMBLAYER, *Fr.* To collect earth together.

REMBARQUER, *Fr.* To re-embark.

REMBOITER, *Fr.* The same as *Emboiter*. To replace, to put together. The latter term is used by the French in artillery and cavalry manœuvres. It is the correlative to *Déboiter*; to break off.

REMETTEZ *vous*. This term agrees

with the phrase—*as you were.* *Se Remettre.* To take a former position, to return to the original ground

REMETTRE, *Fr.* to restore, to bring back again. It is frequently used in a military sense, viz. *Remettre un batallion;* to restore or bring back a battalion to its original formation

REMIT. To lessen; as to remit a part of a soldier's sentence.

To REMONSTRATE, to make a representation of a case or cases wherein one or more may consider themselves to be aggrieved. Military men may remonstrate through their superior officers; but where the duty of the service is concerned, that duty must be first performed with cheerfulness and fidelity.

REMONTER, *Fr.* *To Remount.*

REMONTER *une compagnie de cavalerie*, Fr. To remount a troop of horse.

REMONTER *une rivière*, Fr. To sail up a river.

REMORA, *Fr.* This word is sometimes written *Rémora*, and signifies obstacle, hindrance. It comes from the Latin *Remora*, a small fish, which was supposed by the ancients to impede the progress of a ship.

REMORAL, *Fr.* an officer belonging to a galley, who has charge of the oars.

To REMOVE, to change the situation of a person.

A REMOUNT, means a supply of good and serviceable horses for the whole or part of a cavalry regiment. The following instructions have been copied from a compilation of English general and regimental orders, viz. The size of the horses for the heavy cavalry must run from 15 hands and 1 inch, to 15 3; and the age be 4 or 5 off, if possible; the taking horses coming four must be avoided as much as can be. No horse must be taken for the public service, unless he be very close and compact in his make, very broad across the loins, short and straight backed, close coupled, round barrelled, and well carcassed, wide between the rider's thighs, deep at the girt and shoulders, and full, though not heavy chested, with short jointed, clean, bony legs, and full furnished, with strong thighs: the shoulders must lay well back; the forehand rise so as to give the horse freedom; and the head must be so set on as to admit of his getting his nose in. To this must be added, action, and good sound, full feet, with open heels. No horse must be taken with flat feet, or any lameness, or visible defect. No heavy, fleshy legged, lumbering horse must be taken on any account.

To REMOUNT. To remount the cavalry or dragoons, is to furnish them with horses in the room of those which have been either killed, disabled, or cast.

RENCONTRE, *Fr.* This word has been adopted amongst us, and signifies either a private quarrel, in which individuals accidentally meet and fight; or an unexpected and irregular combat between two bodies of armed men, who belong to armies that are in hostile opposition to each other. Thus, as in the former instance it serves to distinguish the casual determination of a feud or difference from the pre-determined and settled plan of a duel; so in the latter it marks the difference between a skirmish, &c. and a regular battle.

RENDER. See SURRENDER.

RENDEZVOUS, the place appointed for troops to assemble at. It likewise means any particular spot that is fixed upon for two duellists to decide their quarrel.

RENDEZVOUS, RENDEVOUS, in a *military sense*, the place appointed by the general, where all the troops that compose the army are to meet at the time appointed, in case of an alarm.—This place should be fixed upon, according to the situation of the ground, and the sort of troops quartered in the village.—In an open country it is easy to fix upon a place of rendezvous, because the general has whatever ground he thinks necessary. In towns and villages the largest streets, or market places, are very fit; but let the place be where it will, the troops must assemble with ease, and be ready for the prompt execution of orders.

RENDU, *Fr.* Surrendered, given up.

Soldat RENDU, *Fr.* This term is used to express the difference between a soldier who deserts to the enemy, and one who lays down his arms. In the former instance he is called *déserteur;* in the latter, *soldat rendu.* It is sometimes used as a substitute, viz. *Un rendu*, a man who has surrendered.

RENEGADE, RENEGADO, a deserter; any one who goes over to the enemy.

RENFORCEMENT, *Fr.* a hollow place.

RENFORCER, *Fr.* to reinforce, to strengthen, to fortify.

RENFORT, *Fr.* Reinforcement.

RENFORT, *Fr.* a certain part of a cannon so called. See REINFORCE.

REPARATIONS *dans un regiment*, Fr. repair of arms, necessaries, camp equipage, &c.

To RENEW, (*renouveler*, Fr.) to repeat, to begin afresh. Hence to renew hostilities.

RENEWAL. The act of renewing, as the *renewal* of hostilities.

RENVOI, *Fr.* Sending back; any thing returned.

Chevaux de RENVOI, Fr. Returned horses.

REPARTIR, *Fr.* To divide, to separate, to detach.

REPARATION *des troupes*, Fr. Distribution of troops in different quarters.

REPERTORY. See MAGAZINE.

REPLIER, *se replier*, Fr. To fall back, to retreat. In military movements, to take a rear direction towards any particular part of the line, viz.

Se REPLIER *sur la droite*, Fr. To fall back upon the right.

REPLY. After the prisoner's defence before a court-martial, the prosecutor or informant may *reply*, but without noticing any matter foreign to the specific crime or crimes expressed in the charge.

REPORT, sound; loud noise, as that made by the discharge of a musquet or cannon.

REPORT. Specific statement of persons and things. Although this word may, in some sense, be considered the same as *return*, yet it so far differs in military matters, that it is less comprehensive, and relates more immediately to persons and occurrences than to things.

General officers report to the commander in chief only.

The commander in chief's guard reports to himself by one of his aid-de-camps.

Reports of cavalry are given in to the senior generals of cavalry; and reports of infantry, to the senior general officers of infantry On a march the field officer of the piquet reports to the general of the day who leads the column; and in camp to the next superior officer to himself. A provost martial gives in his return of prisoners, and reports to the general of the day.

Judge advocates, acting in districts or garrisons, &c. send in the minutes of courts-martial, and report to the district general. Regimental surgeons report to their commanding officers, and surgeons in districts, &c. to the war office.

Monthly REPORT. Every company in the service of the United States, is required to make a monthly inspection and report, according to forms furnished by the adjutant and inspector.

All troops belonging to the British service, the marines excepted, who report to the admiralty, report through their several commanding officers, &c to the adjutant general and secretary at war, and to the commander in chief.

Special REPORT A special report is said to be made when the name of an officer is transmitted by his commander to the general of a district, independent of the regular returns; and some specific instance of misconduct is laid before him; every officer on his arrival from abroad with a regiment or detachment of troops, must report himself to the governor or commanding officer of the seaport at which he arrives; and every officer who takes his passage for foreign service, must do the same previous to his departure.

The senior officer in each recruiting quarter reports weekly to the field officer of the district, the number and strength of the parties therein. The field officers commanding recruiting parties in districts, report to the adjutant and inspector, to whom all returns and reports are to be transmitted by them, and not direct from the recruiting officers.

Reports are made daily, weekly, or monthly, according to circumstances.

The various subordinate reports consist of

Report of a rear guard.
Report of a barrack guard.
Report of a quarter guard.
Report of a main guard and its dependencies, &c. &c.

In the column of remarks which must accompany each of these reports, it is necessary, for the person who signs, to specify all casualties and extraordinary occurrences according to the particular nature of each report. The different hours at which the grand rounds, visiting rounds, and patroles went, must likewise be put down.

REPOS, *Fr.* Rest, ease. It is used by the French as a word of command, viz.

REPOS, *Fr.* a word of command which agrees with *stand at ease*.

Quartiers de REPOS, *Fr.* Those places are so called where troops remain for some days to refresh themselves.

Soldat REPOSE *sur l'arme*, Fr. a soldier standing at ease with ordered arms.

REPOSEZ *vous sur vos armes*, Fr. Order arms.

In REPOSE, (*en repos*, Fr.) This term, which is manifestly taken from the French, applies to troops that are allowed to be stationary for any given period during an active campaign either through sickness, or from some other cause. Thus the 5th regiment being *in repose*, it was judged expedient to order the 28th to advance by forced marches.

REPOSITORY, a place or repertory, in which any thing is preserved. Thus the British Repository at Woolwich, contains models of every sort of warlike stores, weapons, and fortification: whether invented by officers of the army or civilians, as well of other nations as of Britain, receipts being given to preserve the title to the inventor. The British Repository is indebted to the ingenuity of colonel Congreve, for some of its most useful and important instruments of escalade, fortification, and gunnery.

REPOUSSER, *Fr.* to drive back, to repel.

REPOUSSOIRS, *Fr.* Drivers, chissels.

REPOUSSOIR, *Fr.* a small stick which artificers and fire-workers use in making fire-pots and other works.

REPRESAILLES, *Fr.* Reprisals.

REPRIMAND, a slighter kind of punishment sometimes inflicted on officers and non-commissioned officers. It consists in reproving or reprimanding them at the head of their respective regiments, troop, or company, as the cases may be. A reprimand is sometimes inserted in the orderly books.

REQUISITION, (*réquisition*, Fr.) A term peculiarly used by the French during the course of their revolution, and applicable to most nations in its general import.

It signifies the act of exacting either men or things for the public service. Hence—*Denrées, marchandises mises en réquisition*; necessaries of life, goods, &c. put in a state of requisition, or subject to be disposed of for the common good at a fixed price.

Jeunes gens de la Requisition, *Fr.* Young men required or called upon to serve in the army.

REQUISITIONNAIRE, *Fr.* A person liable to be put in a state of requisition.

RESERVE, *corps de réserve*, Fr. any select body of troops posted by a general out of the first line of action, to answer some specific or critical purpose, in the day of battle. The French likewise call that body *a corps de réserve*, which is composed of the staff of the army, and moves with the commander in chief, from whom it receives the parole or word; but in every other respect it is governed by its own general

RESINE, *Fr.* Rosin.

RESOLUTION, in algebra, the solution of a problem.

Resolution, (*résolution*, Fr.) an indispensible quality of the mind, which every general of an army should possess to its full extent. It is the advice of all wise men, leisurely to digest plans, and calmly deliberate upon them; but when once it becomes necessary to put them into execution, the person entrusted with command, should be prompt and vigorous.

RESOOM, *Ind.* Fees or dues.

To RESPITE, to suspend, to delay; from the French *respiter*.

To be respited *on the muster-roll*, to be suspended from pay, &c. during which period all advantages of promotion, pay, &c. are stopped. It is originally derived from respite, which signifies delay, forbearance, &c. Thus in Clarendon's history of the civil wars we read, that an act passed for the satisfaction of the officers of the king's army, by which they were promised payment in November following; till which time they were to *respite* it, and be contented, that the common soldiers and inferior officers should be satisfied upon their disbanding. At present to *respite* means to deprive an individual of all the advantages attached to his situation; in which sense it signifies much the same as to suspend.

When an officer has exceeded his leave of absence, and has not sent a satisfactory account of himself to his commanding officer, the latter reports him, in an especial manner, to the general of the district, by whom he is returned absent without leave. It sometimes happens, that the colonel or commanding officer gives directions to have him noted on the muster-roll of the regiment; in which case he is said to be respited or deprived of pay.—This is the first step towards suspension from rank and pay, which ultimately terminates in a total exclusion from the service, by the offending party being peremptorily superseded. The name of the person is laid before the secretary at war, who with the approbation of the president, directs the adjutant and inspector to strike it off the list of the army.

The money which is respited upon the muster-roll is accounted for by the account of the war department, and placed to the credit of the public by the paymaster-general.

RESPONSIBILITY. The state of being answerable. All public officers, civil or military, are in a state of responsibility with respect to national concerns

RESPONSIBLE. Answerable; accountable; liable to be called upon.—Colonels of regiments are responsible for the discipline of their men; and captains for the interior economy and clothing of their companies.

RESPONSION, *Fr.* A term used by the French. In military orders signifying the same as *charge* or *redevance*, charge or service. Thus each commandery pays a certain sum, called *somme de responsion*, to its order in proportion to its value.

RESSERRER, to hem in; to confine. *Une garnison fort resserrée*, a garrison narrowly watched by a besieging army, and kept within its walls.

RESSORT, *Fr.* Spring. Elasticity. This word is used in various senses by the French, viz.

Dernier Ressort, *Fr.* the last shift.

N'agir que par ressort, *Fr.* To do nothing of one's own free will; to be influenced, to be acted upon by others.

Manquer de ressort, *Fr.* To want energy, vigor, &c.

Un caractère qui a du ressort, *Fr.* A firm, determined character.

RESSOURCE, *Fr.* Resource, shift, refuge.

Un homme de ressources, *Fr.* a man who has resources within himself.

Un homme plein de ressources, a man full of resources, full of expedients

To REST *arms*, to bring the firelock to the same position as in present arms. See Manual.

To rest *upon arms reversed.* At military funerals the arms are reversed. The soldiers belonging to the firing party, rest upon the butt ends of their firelocks, while the funeral service is performed, leaning with their cheeks, so as to turn from the corpse.

Rest *upon your arms reversed!* A word of command which is used at military funerals.

RESTANT, *Fr.* the remainder; what is left.

RESTE, *Fr.* Remainder, viz. *Le reste des troupes*, the remainder of the troops.

Etre en reste, *Fr.* To be in arrears.

RESTER, *Fr.* to remain behind.

RETENUE, *Fr.* Stoppage; any thing kept back.

RETIAIRE, *Fr.* See Retiarius.

RETIARIUS, a kind of gladiator who fought in the amphitheatre during the time of the Romans. He is thus described by Kennett, in his Roman Antiquities, page 274.

The Retiarius was dressed in a short coat, having a fuscina or trident in his left hand, and a net, from which he derives his name, in his right. With this he endeavored to entangle his adversary, that he might then with his trident easily dispatch him: on his head he wore only a hat tied under his chin with a broad riband.

RETIRADE, *or Coupure*, Fr. In fortification, a retrenchment, which is generally made with two faces, forming a rentrant angle, and is thrown up in the body of a work for the purpose of receiving troops, who may dispute the ground inch by inch. When the first means of resistance have been destroyed, others are substituted by cutting a ditch, and lining it with a parapet. The *retirade* sometimes consists of nothing more than rows of fascines filled with earth, stuffed gabions, barrels or sand bags, with or without a ditch, and either fenced with palisadoes, or left without them.

Whenever it becomes absolutely necessary to quit the head or side of a work, the whole of it must, on no account, be abandoned On the contrary, whilst some determined troops keep the enemy in check, others must be actively employed in throwing up *retirades*, which may flank each other, and in cutting a ditch in front It is particularly incumbent upon the engineer officer to assist in works of this sort, and every officer and soldier should zealously co-operate with him. A slight knowlege of field fortification will on these occasions give a decided advantage. The body of a *retirade* should be raised as high as possible, and several fougasses should be laid beneath it, for the purpose of blowing up the ground on which the enemy may have established himself.

Retirades *as practised by the ancients*: these were walls hastily run up behind breaches that were made by the battering rams. The able commentator upon Polybius observes, that in no instance, did the skill of the great men of antiquity appear in so conspicuous a light, as in the various chicanes to which they resorted for the preservation of a town. Their ingenuity and resolution increased in proportion as the danger approached. Instead of offering to capitulate as the moderns generally do, when a practicable breach has been opened by a besieging enemy, the ancients, in that emergency, collected all their vigor, had recourse to various stratagems, and waited behind the retirades or temporary retreats to give the enemy a warm and obstinate reception. Cæsar, in his Commentaries, has given a minute description of the manner in which these retirades were constructed; and we find them mentioned by Josephus, in his history of the war of the Jews against the Romans.

The intermediate periods, since the days of the Greeks and Romans, and before the modern era furnish various examples on this head. In 1219, Genghis Khan set all his battering rams to work, for the purpose of effecting a breach in the walls of Otrar; but, to his great surprise, he no sooner entered the town, than he found a fresh line of entrenchments that had been thrown up in the very heart of the city. He saw every street cut asunder with temporary ditches, and every house presented fresh obstacles: so much so, that he experienced more difficulty in subduing the inhabitants after he had forced the walls, than had occurred in practising the breach.

When the emperor Charles V. laid siege to Metz in 1552, the duke de Guise, who was governor of the town, instantly adopted the necessary precautions to defend it to the last. He built a new wall behind the one against which the principal attack was directed; and when the breach was made, the besiegers found themselves obstinately opposed afresh, within a short space of the ground they had carried. In consequence of this unexpected check, the enemy's troops grew disheartened; and their want of confidence soon convinced the emperor that the place could not be taken. The siege was unexpectedly raised, and the preservation of the town was entirely owing to the wise precautions that had been adopted by the duke de Guise.

In 1742, marshal Broglio, being closely besieged in the city of Prague, threw up retrenchments within the walls, and prepared to make a most vigorous resistance. An occasion, however presented itself, of which he took advantage, that rendered any further precautions useless. He made a vigorous sortie and forced the enemy to raise the siege.

RETIRED *List*, a list on the British marine establishment upon which superannuated officers are placed.

Officers who RETIRE *in the East India company service*. The India company have resolved, that an officer, (in his military capacity) after twenty years actual service in India, coming to Europe on leave, will be allowed to retire on the pay of his rank, provided he signifies his intention of so doing, within twenty months after his arrival. Officers on leave who are desirous of retiring, and who declare their intention to that effect, within twelve months from their arrival, will be permitted to retire on the pay of the rank they may be entitled to at that period. An officer having completed 22 years actual residence in India, will be allowed to retire on the full pay of his rank, directly on his leaving India.

RETOURS *de la mine*, Fr. returns of a mine. See Gallery.

Retours *de la tranchée*, Fr. returns of a trench. In fortification, the several windings and oblique deviations of a trench which are drawn, in some measure, parallel to the sides of the place attacked, in order to avoid being enfiladed, or having the shot of the enemy scour along the length of the line. On account of these different returns a considerable interval is opened between the head and the tail of the trench, which, were the lines directed, would not be at any great distance from each other.

RETRAITE, *Fr.* See Retreat.

Retraite *dans les montagnes*, Fr. The act of falling back or retreating among the mountains.

Faire **retraite**, *Fr.* To retire, to fall back.

Battre la **retraite**, *Fr.* To beat the tap-too.

Se battre en **retraite**, *Fr.* To maintain a running fight.

RETRAITE, *Fr.* certain appointments which were given during the French monarchy to infantry officers, when they retired from the active duties of their profession, to afford them means of support. The pensions which were settled upon cavalry officers were likewise distinguished by the same term.

Retraite, *Fr.* See Relais.

RETRANCHEMENS, *Fr.* See Retrenchments.

Retranchemens *particuliers qu'on fait sur la tête des brèches d'une place assiégée*, Fr. Particular retrenchments, which are made in front of breaches that have been effected in the walls of a besieged town.

It is always necessary, that retrenchments of this description should have the figures of rentrant angles, in order, that they may not only flank the breaches, but be capable of defending themselves.

A besieging enemy, seldom or ever, attempts a breach at the flanked angle of a bastion, because it must be seen by the two flanks of the neighboring bastions, and be perpetually exposed to the fire of the casemates of the town. Nevertheless should the breach be actually effected, retrenchments might be thrown up, in the same manner that horn-works are constructed, for the purpose of flanking it.

If the breach should be made in the face of the bastion, (which usually happens, because that quarter can be seen by the garrison from one side only) retrenchments in the shape of rentrant angles must be constructed.

Breaches are seldom attempted at the angle of the epaulement, because that part of the bastion is the most solid and compact, and the most exposed to the fire from the curtain to that of the opposite flank, and to the reverse discharge, or fire from the rear Add to this, that the storming party would be galled in flank and rear, not only from the simple bastion, but likewise from the casemates. If, however, a breach should be effected in that quarter, it would become necessary to throw up retrenchments of a saliant and rentrant nature.

In constructing these different retrenchments it must be an invariable rule, to get as near as possible to the parapets of the bastions and to their ruins, in order to batter those in flank and rear, who should attempt to scale, and at the same time to be out of the reach of the besieger's ordnance.

When the head of the breach is so much laid open, that the besieger's cannon can scour all above it, small mines must be prepared beneath, and a retrenchment be instantly thrown up in the body of the bastion.

To **RETREAT**. To make a retrograde movement. An army or body of men are said to retreat when they turn their backs upon the enemy, or are retiring from the ground they occupied: hence, every march in withdrawing from the enemy is called a retreat.

That retreat which is done in sight of an active enemy, who pursues with a superior force, is the one we particularly allude to in this place; being, with reason, looked upon as the glory of the profession. It is a manœuvre the most delicate, and fittest to display the prudence, genius, courage, and address, of an officer who commands: the records of all ages testify it, and historians have never been so lavish of eulogiums as on the subject of the brilliant retreats of their heroes. If it be important, it is no less difficult to regulate, on account of the variety of circumstances, each of which demands different principles, and an almost endless detail. Hence a good retreat is esteemed, by experienced officers, the master-piece of a general. He should therefore be well acquainted with the situation of the country through which he intends to make it, and careful that nothing is omitted to make it safe and honorable. General Moreau's retreat in 1796, has rendered his name immortal. The three most celebrated modern retreats have been—the one already mentioned, that of Prague, and that of general Macdonald in Italy.

Retreat, is also a beat of the drum, at the firing of the evening gun; at which the drum-major, with all the drums of the battalion, except such as are upon duty, beats from the camp colors on the right to those on the left, on the parade of encampment: the drums of all the guards beat also; the trumpets at the same time sounding at the head of their respective troops. This is to warn the soldiers to forbear firing, and the sentinels to challenge till the break of day, when the reveille is beat. The retreat is likewise called setting the watch.

Chequered **RETREAT**, *rêtraite en échequier*, Fr. It is so called from the several component parts of a line or battalion, which alternately retreat and face in the presence of an enemy, exhibiting the figure of the chequered squares upon a chess board.

All manœuvres of a corps retiring, are infinitely more difficult to be performed with order, than those in advancing. They must be more or less accomplished by chequered movements; one body by its numbers or position, facing and protecting the retreat of another; and if the enemy presses hard, the whole must probably front in time and await him: as the ground narrows or favors, different parts of the corps must double; mouths of defiles and advantageous posts must be possessed; by degrees the different bodies must diminish their fronts, and throw themselves into column of march when it can be done with safety.

The *chequered retreat* by the alternate battalions or half battalions of a line going to the rear, while the others remain halted, cover them, and in their turn retire in the same manner, is the quickest mode of refusing a part of a corps to the enemy, and at the same time protecting its movement, as long as it continues to be made nearly parallel to the first position.

In the chequered retreat, the following rules must be observed: the battalions of the division nearest to the enemy, will form flanks as soon as there is nothing in their front to cover them; but the other divisions will not have any flanks except to the outward battalion of each. The battalions always pass by their proper intervals, and it is a rule in retiring, that the left of each shall always pass the right of the neighboring one.—Whatever advantage the ground offers, those advantages must be seized, without too critical an observance of intervals, or minute adherence to the determined distance of each retreat. The division next the enemy must pass in front, through the intervals of the division immediately behind, and any battalion that finds it necessary, must incline for that purpose. The retiring division must step out, and take up no more time than what is absolutely required to avoid confusion. The division nearest the enemy *fires;* the flanks of its battalions only fire when the enemy attempts to push through the intervals. When that division retires it fires on, skirmishes by its riflemen, and if they have none, by men detached from the light companies, if any, or from platoons formed of rear rank men of one or two of the companies, and placed behind the flanks of the battalions. But should any of its battalions be obliged to halt and to fire, a shorter step must then be taken by the line; and should the enemy threaten to enter at any of its intervals, besides the fire of its flanks, such platoons of the line behind it, as can with safety, must give it support.

RETRENCHMENT, in the *art of war*, is any work raised to cover a post, and fortify it against an enemy; such as fascines loaded with earth, gabions, barrels, &c. filled with earth, sand bags, and generally all things that can cover the men, and stop the enemy; but it is more applicable to a ditch bordered with a parapet; and a post thus fortified, is called a *retrenched post*, or *strong post*. *Retrenchments* are either general or particular.

General **Retrenchments**, are a kind of new defence made in a place besieged, to cover the defendants, when the enemy becomes master of a lodgment on the fortification, that they may be in a condition of disputing the ground inch by inch, and of putting a stop to the enemy's progress, in expectation of relief; as, if the besieger's attack a tenaille of the place, which they judge the weakest, either by its being ill flanked, or commanded by some neighboring ground; then the besieged make a great *retrenchment*, inclosing all that part which they judge in most danger. These should be fortified with bastions and demi-bastions, surrounded by a good ditch countermined, and higher than the works of the place, that they may command the old works, and put the besiegers to infinite trouble in covering themselves.

Particular **RETRENCHMENTS**, *or retrenchments within a bastion*, (*retrenchemens dans un bastion*, Fr.) Retrenchments of this description must reach from one flank to another, or from one casemate to another. It is only in full bastions that retrenchments can be thrown up to advantage. In empty bastions you can only have recourse to retirades, or temporary barricadoes above the ramparts. The assailants may easily carry them by means of hand grenades, for these retrenchments never flank each other. It is necessary to raise a parapet about five or six feet thick before every retrenchment. It must be five feet high, and the ditches as broad and as deep as they can be made. There must also be small mines run out in various directions, for the purpose of blowing up the assailants should they attempt to force the retrenchments.

RETURNS, in a *military sense*, are of various sorts, but all tending to explain the state of the army, regiment, troop, or company; namely, how many capable of doing duty, on duty, sick in quarters, barracks, infirmary, or hospital; prisoners, absent with or without leave; total effective; wanting to complete the establishment, &c See Regulations and *Amer. Mil. Lib.*

Returns *of a mine*, are the turnings and windings of the gallery leading to the mine. See Gallery.

Returns *of a trench*, the various turnings and windings which form the lines of the trench, and are, as near as they can be, made parallel to the place attacked, to avoid being infiladed These *returns*, when followed, make a long way from the end of the trench to the head, which going the straight way is very short: but then the men are exposed; yet, upon a sally, the courageous never consider the danger, but getting over the trench with such as will follow them, take the shortest way to repulse the enemy, and cut off their retreat if possible.

Any officer who shall knowingly make a false return to any his superior officer authorised to call for such returns, shall, upon being convicted thereof before a general court-martial, be cashiered.

Whoever shall be convicted of having designedly, or through neglect, omitted sending such returns, shall be punished according to the nature of the offence by the judgment of a general court-martial.

To **RETURN**, in a military sense, to insert the names of such officers, as are present or absent on the stated periods for the identification of their being with their regiments, on detachment, or absent with or without leave.

To be **RETURNED**. To have one's name inserted in the regular monthly, fourteen days, or weekly state of a regiment, according to circumstances; as *to be returned absent without leave;* to be reported to the commander in chief, or to any superior officer, as being absent from the duty of the corps; either from having exceeded the leave given, or from having left quarters without the necessary permission. To be returned upon the surgeon's list as unfit for duty, &c. from illness, &c.

Commanding officers of regiments or posts, in the British service, are regularly to transmit to the adjutant and inspector's office the following returns:

A monthly, on the 1st of each month.

A return of officers, on the 14th of each month.

A weekly state, to arrive on Mondays.

To the war office.

A monthly return, on the 1st of each month.

A return of absent officers, on the 14th of each month.

Every officer commanding a regiment, or detachment, on embarking for a foreign station, will transmit an embarkation return to the adjutant-general's office, and to the war office, a duplicate of which he will deliver to the general or officer commanding at the port from which he embarks.

On a regiment embarking, the commanding officer is to transmit to the adjutant-general's office, a return of the recruiting parties he purposes to leave in Great Britain, or Ireland, specifying their strength, their stations, and the officers by whom they are commanded; a duplicate of this return is to be transmitted to the inspector-general of the recruiting service in the Isle of Wight.

All officers belonging to regiments on foreign stations, not actually employed on the recruiting service, are to report their arrival from abroad, and the cause of their absence, at the adjutant-general's office, and are to leave their addresses with their respective agents, and in case of their changing their places of residence, are immediately to notice the same to their agent: any officer whose address is not with his agent, will be considered as absent without leave, and guilty of disobedience of orders.

Officers upon half pay are, in like manner, to leave their addresses at the war office; particularly so if they should leave the united kingdoms; and officers belonging to the militia are to leave their names, &c. with the several adjutants of regiments.

Commanding officers of regiments or posts, are to transmit to the adjutant and inspector an half yearly return of quarters, on the 1st of December, and the 1st of May, agreeable to the printed form; likewise a report of any march performed by the corps under their orders.

All returns, reports, and papers, purely of a military and public nature, which are to be sent to the war office of the United States, are to be addressed, "To the adjutant and inspector, Washington."

All official letters, intended for the secretary at war, should be transmitted, under covers, addressed as above, to the adjutant and inspector.

To prevent an improper expence of postage, all official letters and returns sent to the adjutant and inspector, are to be sent, under covers, addressed "To the officer by name, with the title of adjutant and inspector, at Washington," and on the outside of the covers is to be written in legible characters, "public service, and then the name and rank of the writer."

RETURN *pistol*. See **PISTOL**.

RETURN *bayonet*. This term is sometimes used, but it is not technically correct, as the proper word of command is *unfix* bayonet.

RETURN *ramrod*. See **MANUAL**.

RETURN *swords*. See **SWORD**.

REVEILLE, is the beat of a drum, about break of day, to advertise the army that it is day light, and that the sentinels forbear challenging.

REVERS, *Fr.* Behind, in rear, at the back of any thing.

Etre vu de **REVERS**, *Fr.* To be overlooked by a reverse commanding ground. When a work, for instance, is commanded by some adjacent eminence, or has been so badly disposed, that the enemy can see its terre-pleine, or rampart, that work may be said to be overlooked, *être vu de revers*. The same term is applicable to a trench when the fire of the besieged can reach the troops that are stationed within it.

REVERS *de la tranchée*, Fr. Literally means the back part of the trench. It is the ground which corresponds with that proportion of the border of the trench that lies directly opposite to the parapet. One or two banquettes are generally thrown up in this quarter, in order that the trench guard may make a stand upon the reverse when it happens to be attacked by a sortie of the enemy.

REVERSE. A contrary; an opposite; as, the reverse, or outward wheeling flank; which is opposite to the one wheeled to or upon. See PIVOT.

REVERSE likewise signifies *on the back*, or *behind*: so we say, *a reverse commanding ground*, *a reverse battery*, &c.

REVERSED *arms*. Arms are said to be reversed when the butts of the pieces are slung or held upwards.

REVERSED. Upside down; as arms reversed.

REVETEMENT, (*revêtement*, Fr.) in *fortification*, a strong wall, built on the outside of the rampart and parapet, to support the earth, and prevent its rolling into the ditch.

REVETEMENT *du rampart*, Fr. Revetement belonging to the rampart.

REVETIR, *Fr.* To line, to cover, to fortify.

REVIEW, (*revue*, Fr.) In the military acceptation of the term, an inspection of the appearance, and regular disposition of a body of troops, assembled for that purpose, is called a *review*.

At all *reviews*, the officers should be properly armed, ready in their exercise, salute well, in good time, and with a good air; their uniform genteel, &c. The men should be clean and well dressed; their accoutrements well put on: very well sized in the ranks; the serjeants expert in their duty, drummers perfect in their beatings, and the fifers play correct. The manual performed in good time, and with life; the men carry their arms well; march, wheel, and form with exactness; manœuvres performed with regularity, both in quick and slow time. The intention of a *review* is, to know the condition of the troops, to see that they are complete, and perform their exercise and evolutions well. See MOVEMENTS, likewise INSPECTION.

To **REVISE,** (*réviser*, Fr.) To review; to re-examine; to re-consider. This term is used in military matters, which relate to the proceedings of a general or regimental court-martial. It sometimes happens that the members are directed ro re-assemble for the purpose of *revising* part of the whole mass of the evidence that has been brought before them, and of maturely weighing afresh the substance of the proofs upon which they have formed their opinion and judgment. Great delicacy and discrétion are required in those who have authority to order a revision of this sort. A court-martial ought to be the most independent court on earth. Interest, prejudice, or partiality, has no business within its precincts. An honest regard to truth, a sense of the necessity of good order and discipline, and a stubborn adherence to facts, constitute the code of military laws and statutes. Quirks, quibbles, and evasions, are as foreign to the genuine spirit of martial jurisdiction, as candor, manliness, and resolute perseverance in uttering what he knows to be the fact, are familiar to the real soldier.

REVOCABLE, (*révocable*, Fr.) That may be recalled. Nominations for appointments in the army, are made by the president of the United States, subject to the concurrence of the senate, who, if they disagree, revoke the appointment.

REVOLT, (*révolte*, Fr.) Mutiny; insurrection.

REVOLTER. One who rises against lawful authority; a deserter, &c.

REVOLTES, *Fr.* Rebels.

REVOLUTION, (*révolution*, Fr.) A change in government, as the throwing off the tyranny of Britain, by the declaration of independence, in 1776, and as the French revolution.

REVOLUTIONNAIRE, *Fr.* A friend to the revolution.

REVOLUTIONNAIRE, *Fr.* An adjective of two genders. Any thing belonging to the revolution. Hence

Armée **REVOLUTIONNAIRE.** A revolutionary army; such as appeared in France.

REVOLUTIONNER, *Fr.* To revolutionize. To propagate principles in a country which are subversive of its existing government.

REWARD, (*récompense*, Fr.) A recompence given for good performed. Twenty shillings are allowed by the mutiny act, as a reward for apprehending deserters.

Military **REWARDS,** (*récompenses militaires*, Fr.) The original instances of military rewards are to be found in the Grecian and Roman histories. The ancients did not, however, at first recompence military merit in any other way than by erecting statues to the memory, or presenting them with triumphal crowns. The warriors of that age were more eager to deserve public applause by extraordinary feats of valor, by temperance and moral virtue, than to become rich at the expence of the state. They thirsted after glory; but it was after a species of glory which was not in the least tarnished by the alloy of modern considerations.

The services which individuals rendered were distinguished by the kind of statue that was erected, and its accompanying decorations, or by the materials and particular formation of the crowns that were presented.

In process of time, the state or civil government of a country, felt the propriety and justice of securing to its defenders something more substantial than mere show and unprofitable trophies. It was considered, that men who had exposed their lives, and had been wounded, or were grown infirm through age, &c ought to be above want, and not only to have those comforts which through their exertions millions were enjoying, but to be placed in an independent and honorable situation. The most celebrated of their warriors were consequently provided for at the public expence, and they had regular claims made over to them, which were answered at the treasury.

Triumphal honors were likewise reckoned among the military rewards which the ancients voted to their best generals. Fabius Maximus, Paul Emilius, Camillus, and the Scipios were satisfied with this recompense for their services. With respect to old infirm soldiers, who were invalided, they were provided for by receiving, each a lot of ground, which they cultivated and improved. Lands, thus appropriated, formed part of the republican or national domains, or were divided amongst them in the conquered countries.

The Roman officer was rewarded for his services, or for particular acts of bravery in three ways: 1st, By marks of honor or distinction, which consisted of two sorts, viz. Of that which was merely ornamental to their own persons, or limited to the investiture for life; and of that which may be called *rememorative*, such as statues, &c. The latter descended to their posterity, and gave their families a certain rank in the republic. 2dly. By pensions or allowances, and 3dly. By a grant of lands which exceeded the lots given to private soldiers. These lands, the property of the veteran soldier, in process of time became objects of solicitude among the Patricians and rich men; they encroached upon them, and often excited foreign wars, in order to take away the citizens, and in their absence, engross their lands; this rapacity of the senators, was the true cause of the *agrarian laws*, which has generally been held up as a reproach to the injured and not to the oppressors, and the people in republics have been held forth as turbulent and inimical to personal property, because the people of Rome sought to recover the lands of which they had been despoiled by the avarice of the senate, and by an inordinate spirit of speculation.

The Franks, who got possession of the country which was formerly occupied by the Gauls, had, at first, no other method of recompensing their generals than by giving them a certain proportion of land. This grant did not exceed their natural lives, and sometimes it was limited to the time they remained in the service.

These usages insensibly changed, and by degrees it became customary for the children of such men as had received grants of national territory, to continue to enjoy them; upon condition, however, that the actual possessors of such lands should be liable to military service. Hence the origin of *fiefs* in France, and the consequent appellation of *milice des fieffés*, or militia, composed of men who held their lands on condition of bearing arms when called upon. The French armies were for many years constituted in this manner; and the custom of rendering military service in consideration of land tenure, only ceased under Charles the VIIth.

In process of time, those lands which had been originally bestowed upon men of military merit, descended to their children, and were gradually lost in the aggregate mass of inheritable property. Other means were consequently to be resorted to by the state, in order to satisfy the just claims of deserving officers and soldiers. The French, therefore, returned to the ancient custom of the Romans, and rewarded those, who distinguished themselves in war, by honorary marks of distinction.

Under the first race of French kings may be found several instances of men of obscure condition having, by their valor, obtained the rank and title of count, and even those of duke. These dignities, of themselves, entitled the bearers to places of high command in the armies. The title of knight, most especially of *knight banneret*, gave very high rank during the reign of Philip Augustus: and in the reigns of one or two of his predecessors, it was bestowed upon individuals who behaved in a distinguished manner in the field.

This species of reward did not cost the public any thing. It was bestowed upon the individual by the general of the army, and consisted in nothing more than a salute given by the latter on the field of battle, by which he became *knight banneret*, and was perfectly satisfied with the honor it conferred.

This mode of rewarding individuals for great actions or long services, continued until men inlisted themselves for money, and the army was regularly paid, according to the several ranks of those who composed it. At this period, however, it became expedient to have recourse to the second method which was adopted by the Romans to compensate individuals for services rendered to the state. The royal treasury was either subjected to the annual claims of individuals, or to the payment of a specific sum, for having eminently distinguished themselves under arms. Notwithstanding this, honorary rewards continued to be given, and the knighthood conferred in the field by the kiss or salute of a general, which the French style *accolade*, was practised until the 16th century:

It was usual, even during that century, to reward a soldier, who did a brave action, by some mark of distinction, that was given on the spot; by a crown made of grass or other verdure, which was placed upon his head by his comrades, or by a gold ring, which his commanding officer put upon his finger in the presence of the whole troop or company to which he belonged. It sometimes happened, as in the reign of Francis the first, that this mark of distinction was given by the general of the army.

Several brave men have been distinguished with titles of nobility and armorial bearings, which were conferred by princes, in consequence of some singular feat or exploit. There have been instances recorded in the French history of extraordinary actions having been rewarded upon the spot by kings who commanded in person. A soldier of merit was peculiarly honored by Louis the XIth, for bravery and good conduct in the field. That monarch took the collar of a military order off his own neck, and placed it round the neck of Launay Morvillier, as a reward for great prowess and intrepidity.

Besides the gramineous crown and gold ring, which were thus given as marks of honor and distinction, the private soldiers were frequently rewarded by small sums of money when they performed any particular feat or act of bravery. They were likewise promoted from the ranks, and made serjeants or corporals.

Honorary rewards and compensations for service were not confined to individual officers and soldiers. Whole corps were frequently distinguished in the same manner. When several corps acted together, and one amongst them gave signal proofs of gallantry and good conduct, that one frequently took precedence of the others in rank, or was selected by the sovereign to be his personal guard. Sometimes, indeed, the king placed himself at the head of such a corps on the day of battle, thereby testifying his approbation of their conduct, and giving a proof of his confidence in their bravery.

It is now usual, in most countries, to confer marks of distinction on those corps, that have formed part of any army that has signalized itself. Thus the kettle drums, under the appellation of *nacaires*, were given to some regiments, as proofs of their having behaved gallantly on trying occasions.

The military order of St. Louis, which was created by Louis the XIVth in 1693, and that of Maria Theresa. The modern French *legion of honor*, instituted by Bonaparte, adopts and organizes into a most influential and comprehensive military and political system, all the usages of pre-existing military orders; and fixes degrees of rank under various denominations, those thus decorated are preferred for other trusts and honors. There are many other orders in different countries, were only instituted for the purpose of rewarding military merit. The Greeks and Romans satisfied themselves with honorary rewards, or occasional compensations. The moderns, particularly the French and English, have placed military claims upon a more solid footing. The gratitude of the public keeps pace with the sacrifices of individuals, and permanent provisions are made for those who are wounded or rendered infirm in the service.

The Athenians supported those who had been wounded in battle, and the Romans recompensed those that had served during a given period. The French kings reserved to themselves the privilege of providing for individuals who had been maimed in action, by giving them certain monastic allowances and lodging, &c. in the different convents of royal institution. Philip Augustus, king of France, first formed the design of building a college for soldiers who had been rendered infirm, or were grown old in the service. Louis, surnamed the great, not only adopted the idea, but completed the plan in a grand and magnificent style. Charles the second, on his restoration to the crown of Great Britain, established Chelsea, and James the second added considerable improvements to this institution.

REZ, *Fr.* A preposition which signifies close to, adjoining, level with. *Rez le metal* in a right line with the metal, a phrase used in pointing guns, to discriminate between the real and artificial point blank; it means on a level with the tops of the base-ring and swell of the muzzle. As *rez pied*, *rez-terre*. *Démolir les fortifications*, *rez-pied*, *rez-terre*. To level the fortifications with the ground.

Rez-*de-chaussée*, Fr. The ground floor. This term properly means the surface or floor of any building which is even with the ground on which it is raised It would be incorrect to say *Rez-de chaussée d'une cave, ou du premier étage d'une maison*; the ground floor of a cellar, or of the first story of a house.

RHAGOON, *Ind.* The twelfth month which, in some respect, corresponds with February. It follows the month Magh, which agrees with January.

RHINELAND *rod*, is a measure of twelve feet, used by all the Dutch engineers.

RHOMBUS, (*Rhombe*, Fr.) in *geometry*, an oblique angled parallelogram, or a quadralateral figure whose sides are equal and parallel, but the angles unequal; two of the opposite ones being obtuse, and the other two acute.

RIBAND, *Rubande*, *Ruban*, Fr. This word is sometimes written *Ribbon*. A narrow web of silk which is worn for ornament.

Riband *cockade*. The cockades which are given to recruits, and is commonly called *the colors*.

RIBAUDE, *Fr.* Irregular, noisy, ill-mannered. This term is likewise used as a substantive, viz.

Un Ribaud, *Fr.* A noisy, ill-mannered fellow. It is an old French word, which at present is seldom spoken in the polished circles of life. In former times, as late indeed as during the reign of Philip Augustus, king of France, it was current without carrying along with it any particular reproach or mark of infamy. The foot guards, who did duty at the palace, were generally called *ribauds*, from the looseness of their morals; which by degrees grew so very corrupt, that the term, (harmless perhaps at first) was insensibly applied to persons guilty of dishonorable acts. Hence pick-pockets, thieves, cheats, &c. were called *ribauds*.

On which account the provost of the hotel or town house in Paris, was popularly stiled *roi des ribauds*, or provost of *ribauds* This phrase prevailed until the reign of Charles the VIth.

Ribaud, *Fr. adj.* likewise means lewd, debauched, &c.

Un homme Ribaud, *Une femme* Ribaude, *Fr.* A licentious man; a licentious woman.

RIBAUDEQUIN, *Fr.* A warlike machine or instrument, which the French anciently used. It was made in the form of a bow, containing twelve or fifteen feet in its curve, and was fixed upon the wall of a fortified town, for the purpose of casting out a prodigious javelin, which sometimes killed several men at once.

According to Monstrelet, a French writer, *ribaudequin*, or *ribauderin*, signified a sort of garment which was worn by the soldiers when they took the field.

RIBLEURS, *Fr*. Vagabonds, debauched fellows that run about the streets, or spend their nights in disorderly houses. Soldiers who give themselves up to pillage &c. in war time, are likewise called *ribleurs*, by way of reproach.

RIBLER, *Fr.* To ramble, &c. was formerly the verb, and *riblerie*, the act of rambling, &c. the substantive. Both terms are now obsolete, except among the lower orders.

RICOCHER, *Fr.* To ricochet, to batter or fire at a place with ricochet shots. The author of a very valuable work entitled, *Essai Général de Fortification, et d'Attaque et Defense des places*, observes in a note to page 89, vol. 1, that in strict analogy, we should say *ricocheter;* but use, which is above all rules, has made *ricocher* a technical term, whenever we speak of the ricochets of cannon shot.

Une face **RICOCHÉE**, *Fr.* The face of a fortification, which is fired at with ricochet shots.

RICOCHET, literally means a bound, a leap, such as a flat piece of stone or slate makes when it is thrown obliquely along the surface of a pool.

Ricochet, (*ricochet*, Fr.) in *gunnery*, is when guns, howitzers, or mortars, are loaded with small charges, and elevated from five to twelve degrees, so that when fired over the parapet, the shot or shell rolls along the opposite rampart. It is called *ricochet-firing*, and the batteries are likewise called *ricochet-batteries*. This method of firing out of mortars, was first tried in 1723, at the military school of Strasburgh, and with success. At the battle of Rosbach in 1757, the king of Prussia had several 6-inch mortars made with trunnions, and mounted on travelling carriages, which fired obliquely on the enemy's lines, and amongst their horse, loaded with eight ounces of powder, and at an elevation of one degree fifteen minutes, which did great execution; for the shells rolling along the lines, with burning fuzes, made the stoutest of the enemy not wait for their bursting. See Battery.

Ricochet firing is not confined to any particular charge or elevation; each must vary according to the distance and difference of level of the object to be fired at; and particularly of the spot on which it is intended the shot shall make the first bound. The smaller the angle is under which a shot is made to ricochet, the longer it will preserve its force and have effect, as it will sink so much the less in the ground on which it bounds; and whose tenacity will of course present so much less resistance to its progress. In the ricochet of a fortification of any kind, the angle of elevation should seldom be less than 10°, to throw the shot over a parapet a little higher than the level of the battery. If the works should be of an extraordinary height, the piece must be removed to such situation, and have such charge, that it can attain its object at this elevation, or at least under that of 13° or 14°, otherwise the shot will not ricochet, and the carriages will suffer very much. The first gun in a ricochet battery should be so placed as to sweep the whole length of the rampart of the enemy's work, at 3 or 4 feet from the parapet, and the rest should form as small an angle with the parapet as possible. For this purpose the guns should be pointed about 4 fathoms from the face of the work towards the interior. In the ricochet of ordnance in the field, the objects to be fired at being principally infantry and cavalry, the guns should seldom be elevated above 3 degrees; as with greater angles the ball would be apt to bound too high, and defeat the object intended. For ricochet practice, see the different pieces of ordnance, as Gun, Mortar, and Howitzer.

Battre en Ricochet, *Fr.* To put a sufficient quantity of gunpowder in a piece of ordnance to carry the ball, with effect, into the works that are enfiladed. This sort of firing is generally practised along the whole extent of a face or flank. The celebrated marshal Vauban first invented the mode of firing *ricochet*-shots. He tried the experiment at the siege of Ath, in 1679.

Battre un rempart à **RICOCHET**, *Fr* To batter a rampart with ricochet shots.

RIDEAU is a rising ground, or eminence, commanding a plain, sometimes almost parallel to the works of a place: it is a great disadvantage to have rideaus near a fortification, which terminate on the counterscarp, especially when the enemy fire from afar: they not only command the place, but facilitate the enemy's approaches.

RIDER, in *artillery carriages*, a piece of wood somewhat higher than broad, the length equal to that of the body of the axle-tree, upon which the side pieces rest, in a four-wheel carriage, such as the ammunition waggon, block carriage, and sling waggon.

Rough Rider See Rough.

RIDING-*Master*. In the cavalry, an icer whose duty it is to instruct the icers and soldiers in the management of ir horses.

To RIFLE, to plunder; to rob.

Rifle, the thread, ray, or line made in fled barrel.

Rifled *gun*, Rifled *piece*, Rifled *barrel*, } *Arquebuse rayée*, Fr. a fire-arm which has lines or exiguous cas within its barrel that run in a virmilar direction, and are more or less nume- is, or more indented, according to the icy of the artificer. With respect to word itself, it does not appear to bear y other analogy to our common acceptan of the verb, than what may be vully applied to the common practices riflemen. It is, on the contrary, more mediately connected in sense and signiation with an old obsolete word *to ray*; streak: which comes from the French *er*. The rifled barrel possesses many vantages over the common one; which vantages are attributed to the threads or s with which it is indented, These reads are sometimes cut in such a manr, that the line which commences on the ht side at the breech, terminates on the t at the muzzle; by which means the ll acquires a rotary movement, revolv- once and a half round its own axis bee it quits the piece, and then boring ough the air with a spiral motion. It well known, that cannon balls and shot t of common barrels are impelled in a e formed by the centre of the ball, and ompound of the projectile force of the plosion acted upon by the air and by vitation in its course; the ball has a dency to rise upward to a certain extent er leaving the muzzle of the gun; its rticular motion is as if the ball had a nsverse axis, and rolled forward in that ie, in the manner that the wheels of a riage roll; and at the same time conue their progression forward. See *ner. Mil. Lib.*

The rifled barrels of America, during revolution, contained from 10 to 16 s or threads; some had as few as four. me persons have imagined, that those 16 rays were the best, from a supposin that by the air collapsing in the seve- grooves, the ball obtained more velo- y. Mr. Robins, however, seems to fer in opinion, particularly with respect the depth of the grooves. He observes, ge 339 and 340, in his Tracts on Gun- y, that whatever tends to diminish the tion of these pieces, tends at the same ie to render them more complete; and sequently it is a deduction from hence, it the less the rifles are indented, the ier they are; provided they are just ficient to keep the bullet from turning und the piece. It likewise follows, it the bullet ought to be no larger than be just pressed by the rifles, for the er the bullet moves in the piece, supposing it not to shift its position, the more violent and accurate will its flight be It is necessary, that the sweep of the rifles should be in each part exactly parallel to each other. See *Robins on Gunnery*, page 328.

Paradés, a gunsmith at Aix-le-Chapelle, who was reputed to be very ingenious in the construction of rifled barrels, used to compress his barrels in the centre.

RIFLEMEN, experienced marksmen, armed with *rifles*. They formed the most formidable force of the United States in the revolution, being posted along the American ranks, and behind hedges, &c. for the purpose of picking off the British officers. They have proved equally fatal in the hands of the French during their revolution. Considerable improvements are daily made; and light infantry battalions, like the chasseurs of the French, should form a considerable portion of every army, and all infantry and cavalry should be taught to act as riflemen, as well as artillerists.

Mounted Riflemen, are no other than good riflemen, accustomed to horsemanship, mounted.

RIGHT, that which is ordered; that which justly belongs to one.

Rights, certain unalienable claims and privileges, which every individual, civil as well as military, possesses in regulated community. See Wrongs.

RIGOL. See Circle.

RING. A circle, an orbicular line.

Ring *of an Anchor*. That part of the anchor to which the cable is fastened.

RINGS, in *artillery*, are of various uses; such as the lashing-rings in travelling-carriages, to lash the sponge, rammer, and ladle, as well as the tarpauling that covers the guns; the rings fastened to the breeching-bolts in ship-carriages; and the shaft-rings to fasten the harness of the shaft-horse by means of a pin.

RINGS *of a Gun*. Circles of metal, of which there are five, viz.

Base-ring, *reinforce-ring*, *trunnion-ring*, *cornice-ring*, and *muzzle-ring*. See *Am. Mil. Lib.*

RINGLEADER. The head of any particular body of men acting in a riotous or mutinous manner.

To Ring. To make a sharp reverberating noise.

Ring *Ramrod!* A word of command which is sometimes used at private inspections, to try the bottom of the barrel of a musquet.

RINGROD, *Fr.* A strong iron bar which is used in forges. It likewise means a thick pole with an iron ferrel.

RINGRAVE, *Fr.* Pantaloon breeches.

RIOT and *Tumult*. Sedition, civil insurrection, disturbance, &c. A breach of the peace committed by an assembled multitude.

RIOTERS. Disturbers of the public peace; persons acting in open violation of good order; raising or creating sedition, &c.

RIPOSTE, *Fr.* A parry and thrust. It likewise signifies in a figurative sense, a keen reply, a close retort.

RIPOSTER, *or* RISPOSTER, *Fr.* In fencing, to parry and thrust.

RISBAN, *Fr.* In fortification, a flat piece of ground upon which a fort is constructed for the defence and security of a port or harbor. It likewise means the fort itself. The famous *Risban*, of Dunkirk, was built entirely of brick and stone; having within its walls excellent barracks, a large cistern well supplied with water, magazines for stores, provisions, and ammunition. A ready communication was kept up with the town by means of the jetée, which corresponded with the wooden bridge that joined the entrance into the fort. The rampart was capable of receiving forty-six pieces of ordnance, which were disposed in three different alignements or tiers, owing to the triangular figure of the fort; so that a fire could be kept up on all sides.

To RISE. To break into commotions; to make insurrections.

To RISE. In a military sense, to make hostile attack; as the military rose against their government.

To RISE. To obtain promotion.

To RISE *from the ranks.* To obtain promotion by degrees after having been in the ranks as a private soldier; a circumstance which has happened to some of the best generals in the world.

RISE. Increase of price; as the rise of commissions in the army upon the prospect of peace.

RISSALA, *or* RASSAULA, *Ind.* An independent corps of cavalry.

RISSALDAR, *Ind.* The commander of an independent corps of cavalry.

RIVAL, one who is in pursuit of the same thing which another pursues. A competitor.

RIVAL *Powers.* Nations are so called when their relative situation and resources in men and money, &c. enable them to oppose each other.

RIVERAINS, *Fr.* Persons who inhabit the banks of rivers. By a regulation which was in force during the French monarchy, all persons, so situated, were obliged to leave a space 20 feet broad at least, between their houses or huts, and the bank, for the convenience of navigation. A set of men, called *baliseurs*, were paid to see this regulation strictly complied with.

RIVER, (*Rivière*, Fr.) a land current of water bigger than a brook.

Fordable RIVER. A river which may be passed without the assistance of any floating machines. In order to sound the ford, and to ascertain the state of it, men on horseback are first ordered to cross. By that means you will be able to know whether any obstacles have been thrown in the way by the enemy; for nothing is more easily effected. The passage of a ford may be rendered impracticable by throwing whole trees in, by tables or platforms covered with nails, and by stakes. The two latter impediments are the most dangerous. But stakes are not easily fixed, and are consequently seldom used. When fords are embarrassed by them, it requires some time and trouble to clear the river; and it is equally difficult to get rid of the inconvenience that arises when wells have been sunk. Whenever there is reason to apprehend such obstacles, it is always best to reach the ford at dusk. A good resource in such cases, is to collect a great number of empty casks or hogsheads, and lay over them either platforms of boards or faggots of underwood and boards over them, upon which either cavalry or artillery may pass. Intervals sufficient for the passage of the water must be left. The banks should be lined with riflemen to cover the passage; light guns and grape might be employed upon suitable ground.

When the prince of Condé in 1567, resolved to cross the river Seine, the royalists who were on the opposite side, endeavored to prevent his passage by throwing quantities of madriers or thick planks that were nailed together, iron hoops and water-cats into the ford. The Hugonots or Protestants, however, were not diverted from their purpose. Aubigné, a French writer, says, that on that occasion they placed 400 arquebusiers upon the bank to protect the men that raked the ford.

This was certainly a singular method which was used to clear a ford, nor could it be done without much difficulty, and no inconsiderable share of danger. The chevalier Folard has proposed a much safer, and a much easier way, by means of grappling hooks, tied to long ropes, which might be thrown into the ford. Yet even in this case, observes the writer, the object could not be accomplished if the river were broad, unless the persons employed in the undertaking, be under the cover of so heavy a discharge of ordnance and musquetry, that the enemy would not be able to interrupt them, even from an intrenched position on the opposite bank.

With respect to caltrops, the removal of them, when properly distributed at the bottom of a ford, must be attended with great difficulty; for they must render the passage absolutely impracticable, unless they were to sink very deep into the mud and sand, and thus become useless. The men that first enter are in this case the only persons incommoded, but the rest may follow without much hazard.

It sometimes happens, that the bottom of a stream or rivulet is firm and gravelly; when this occurs, the greatest precautions must be taken to escape the effects of caltrops, which would be extremely hurtful to any persons that might attempt to cross

In order to obviate their mischievous consequences, and to render them in a manner useless, a good stock of hurdles must be provided. The soldiers will hand these to one another, force them into the water, and then cover them with stones.

When one or two fords in a river are so situated, that several battalions cannot cross them upon one front, it is then highly prudent to throw a bridge over, either above or below the ford; for a swell may intervene and render it otherwise impassable; and to which, you have the advantage of getting a greater number of troops over at once.

In order to effect a passage for his army over the river Segre, Cæsar gave directions that ditches, thirty feet broad, should be dug in such parts of the banks as might with ease receive the water out of the stream, and render it fordable. Having accomplished this object, he found no difficulty in reaching Petréius, who, being in the daily fear of wanting provisions and forage for his men, was on the eve of quitting his position and marching forwards.

The passage of the Granicus by Alexander the great, is likewise mentioned in history, as an instance of bold enterprise. But however celebrated that act may be in ancient records, we shall not be thought partial to the moderns when we state, that the passage of the river Holowitz by Charles XII. of Sweden, was equally bold and well managed.

The passage of the Tagliamento by Bonaparte during his campaign in Italy, would be the most celebrated of modern times, had not the passage of the Danube in 1809, eclipsed all similar achievements by the magnitude of the difficulties to be overcome, and the astonishing success of the means by which they were overcome.

RIVET, a fastening pin clenched at both ends, so as to hold an intermediate substance with more firmness.

RIVETING-*plates*, in *gun carriages*, small square thin pieces of iron, through which the ends of the bolts pass, and are riveted upon them.

RIZAMEDAR, *Ind.* An officer commanding a small body of horse.

RO, *Ind.* In Indian music means quick.

ROBE.*courte*, Fr. literally means a short gown. Provost-marshals, under-bailiffs, vice-seneschals, their lieutenants, and various other persons, occasionally employed in camps and garrisons, to assist the military in maintaining internal good order and discipline, were formerly called in France *officiers de robe-courte*.

ROC, *Fr.* A rock.

Roc *de lance*, Fr. In tournaments the wooden part of a lance is so called.

ROCHER, *Fr.* a large rock; derived from *roc*, and generally bearing the same import.

ROCHE *à feu*, Fr. a solid composition, which gradually consumes when it has been lighted, but which emits a very broad and lively flame, and is not extinguished by water.

ROCKETS. *Composition.*

	Old proportion.			*New proportion.*	
	lbs.	oz.		lbs.	oz.
Salpetre	4	0	—	4	4
Sulphur	1	0	—	0	12
Charcoal	1	8	—	2	0

Composition for the Stars.

Mealed powder . . .	0 lb.	8 oz.
Seltpetre	8	0
Sulphur	2	0
Antimony	2	0
Isinglass dissolved . . .	0	3½
Spirits of wine . . .	1 pint.	
Vinegar	1 quart.	

Composition for rain to head sky rockets, is the same as the above for the rockets.

General Table of Sky Rockets.

		2 Pound.	1 Pound.	½ Pound.	¼ Pound.
		Inch.	Inch.	Inch.	Inch.
Case	Exterior diameter	2.13	1.69	1.34	1.06
	Interior diameter	1.529	1.214	0.961	0.761
	Length before driving	15.97	12.67	10.05	8.25
Length of guage for the choke		1.5	1.25	1.0	0.75
Cylinders for heading	Diameter	2.84	2.25	1.79	1.39
	Length	4.26	3.38	2.68	2.12
Cones for heading	Diameter	2.84	2.25	1.79	1.39
	Height	4.36	3.38	2.68	2.18
Mallet for driving—	Weight	1lb.	3 8oz.	2 1	1 10
No. of Strokes		31	21	18	13

Copper Ladles for filling Sky Rockets.

Length, 1½ the exterior diameter of the case.

Diameter, equals the interior diameter of case.

Circumference, ⅔ the interior calibre of the case.

Sky rockets are driven with composition up to 4 1-2 exterior diameters of the case from the choke; and 1-5 of a diameter above the composition with good clay. They are bored and reamed up to 3 1-2 diameters.

Dimensions of Sticks for Rockets. General rules.

For rockets from 1-2 an ounce to one pound, the stick must be 60 diameters of the rocket in length: for rockets from one pound and upwards fifty or fifty-two diameters. Their thickness at top about 1-2 a diameter, and their breadth very little more. Their square at bottom equal to 1-2 the thickness at top.

Kind of Rockets.	6 Pr.	4 Pr.	2 Pr.	1 Pr.	½ Pr.	¼ Pr.	⅛ Pr.
Distance of poise from the point of the cone	ft. in 4 1½	ft. in 3 9	ft. in 2 9	ft. in 2 1	ft. in. 1 10½	ft. in 1 8	ft. in 1 3

Rockets of between 3 and 4 inches diameter have been observed to ascend as high as 1000 or 1200 yards; but the height of common rockets is between 450 and 600 yards; and their flight usually short of 7 seconds.

Rocket *as used in India*. A most formidable weapon against cavalry; they are made of the hollow tube of the bamboo, of a very large size, filled with the usual composition of rockets. The rod is only a part of the same bamboo, the six eighths or seven eighths of which is cut away, leaving the rod. See Fougette.

Rockets. See Laboratory.

ROD. See Measuring.

RODS, or *rammers*, either of iron or wood, to drive home the charges of musquets, carabines, and pistols.

Rods, or *sticks*, fastened to sky-rockets, to make them rise in a straight line.

RODOMONT, *Fr.* A bully. An unmilitary character.

Raire le Rodomont, *Fr.* To bully, to talk loudly without possessing the real spirit of a man or soldier.

RODOMONTADE, *Fr.* Rodomontade. The act of bullying, vain boasting or arrogating to ourselves qualities which we do not possess. A French writer has very justly observed, that there cannot be a greater defect in the character of an officer than an overweening display of real or fictitious talents. The word is derived from one Rodomont, the hero or principal character in an old romance, who makes himself conspicuously ridiculous in this way. Sir John Falstaff and Bobadil in English comedy, are specimens of this character.

ROGUE'S *March*. See March.

ROHILLAS, *Ind.* A tribe of Afghans inhabiting the country north of the Ganges, as far as Oude to the eastward.

ROI, *Fr.* King.

ROI *d'armes*, Fr. See King at arms.

ROKER, *Ind.* Cash.

ROLE, *Fr.* A muster roll, state, or return. The word *Role* is used among the French indiscriminately, to signify either the effective force of an army, or the actual quantity of stores and ammunition which the magazines contain.

To roll *in duty*, is when officers of the same rank take their turns upon duty pursuant to some established roster, as captains with captains, and subalterns with subalterns, and command according to the seniority of their commissions.

To roll. To continue one uniform beat of the drum, without variations, for a certain length of time. When a line is advancing in full front, or in echellons, for any considerable distance, the music of one regulating battalion may, at intervals, be permitted to play for a few seconds at a time, and the drums of the other battalions may be allowed occasionally to *roll*; drums, likewise *roll* when troops are advancing to the charge.

Long roll. A beat of drum by which troops are assembled at any particular spot of rendezvous or parade.

Muster-Roll, is a return, given by the muster-master, on which are written the names of both officers and soldiers of the regiment, troop, or company, with their country, age, and service.

Squad Roll. A list containing the names of each particular squad. Every non-commissioned officer and corporal, who is entrusted with the care and management of a squad, must have a roll of this kind.

Size-Roll. A list containing the names of all the men belonging to a troop or company, with the height or stature of each specifically marked. Every serjeant keeps a regular size-roll, and every captain of a troop or company ought to have one likewise.

Roll-*Call*. The calling over the names of the several men who compose any part of a military body. This necessary duty is done by the serjeants of companies morning and evening, in every well regulated corps. Hence *morning roll-call*, and *evening roll-call*. On critical occasions, and in services that require promptitude and exertion, frequent roll-calls should be made.

ROLLER. A small wheel placed at the foot of the hammer of a gun, or pistol lock, in order to lessen the friction of it against the hammer or feather spring.

Roller likewise means a long piece of wood which is rounded and made taper to suit the regulated size of a military trail.

Roller. In surgery, a long and broad

ligature, usually made of linen cloth, for binding, surrounding, and containing the parts of the human body, and keeping them in their proper situation, thereby disposing them to a state of health and redintegration.

ROLLERS, are round pieces of wood of about nine inches diameter, and four feet long, used in moving pieces of artillery from one place to another.

ROMAINE, *Fr.* A steelyard or balance for weighing things of various weights by one single weight, as from one single pound to 112 pounds.

ROMPRE, *Fr.* To break.

Rompre *un battaillon*, Fr. In military evolutions to break a battalion into a given number of parts for the purpose of defiles, &c.

Rompre *en colonne*, Fr. To break into column.

RONDACHE, *Fr.* A sort of shield which the French formerly used, and which is still carried by the Spaniards.

RONDEL, in *fortification*, a round tower, sometimes erected at the foot of a bastion.

RONDES, *Fr.* See Rounds.

Ronde *Major*, Fr. Town-majors round. So called from the town-major visiting the different quarters of a garrison during the night. This round, in some degree, corresponds with our grand round.

Rondes *roulantes*, Fr. Rounds that are made by officers, serjeants, or corporals, over a certain part of the ramparts. These agree with our visiting rounds. The French say, *qui va la?* Who goes there? technically with us, Who comes there?

Ronde *d'officier*. Officer's round.

Chemin des Rondes, *Fr.* A path marked out for the convenience of the rounds.

Ronde *de gouverneur*, Fr. The governor's rounds.

The French method of ascertaining the nature of the several rounds is by challenging in the same manner that we do, viz. *qui va la?* Who comes there? This must be said sufficiently loud for the main guard to hear. He is instantly answered: *ronde de governeur*, governor's rounds; *ronde major*, major's round, or grand round, and so on, according to the nature of the rounds. The sentry, who stands posted near the guard-house, after having cried out—*Demure là;* stop there: or as we say, stop round; cries out again, *Caporal hors de la garde*, corporal turn out the guard. The corporal or officer of the guard with his sword drawn, according to the French custom, repeats, *qui va la?* Who comes there? He is answered *ronde*, round. He then says, *avance qui a l'ordre;* let him advance who has the parole or countersign; or, as we say, advance one, and give the countersign.

Ronde *des officiers de picquet*, Fr. Piquet rounds.

Rondes *chez les Turcs*, Fr. See Turkish rounds.

RONDELLE, *Fr.* a small round shield, which was formerly used by light armed infantry. It likewise means a part of the carriage of a gun.

RONDELIERS, *Fr.* Soldiers who were armed with rondelles, or small wooden shields, covered with leather, were anciently so called.

ROPE. A cord; a string; a halter; a cable; a haulser.

Rope is always distinguished by its circumference: thus a two inch rope means a rope of 2 inches in circumference.

Rule for finding the weight of Ropes.

Multiply the square of the circumference in inches, by the length in fathoms, and divide the product by 480 for the weight in cwt. See also Drag ropes.

Rope *of sand.* A phrase in familiar use to signify disunion, want of adhesion and continuity. Thus the colonel and the captains of a regiment disagreeing may be called a *rope of sand.*

ROPES, of various lengths and thickness, according to the uses they are made for; such as drags for the gin, for the sling cart and waggon, &c.

Drag-Ropes, according to the old practice in the *artillery*, by which the soldiers pulled the guns backwards or forwards, both at practice and in an engagement, were of the following dimensions, viz.—For a 24-pounder, 54 feet long, with the loop-holes for the pegs included, and 5½ inches in circumference; for 18 and 12-pounders, 48 feet long, and four inches in circumference; for 6 and 3-pounders, 39 feet long, and 1 7-8 inches in circumference. For 13 and 10-inch howitzers, 45 feet long, and 6½ inches in circumference; for 8-inch howitzers, 48 feet long, and four inches in circumference; for all other howitzers, 35 feet long, and two inches in circumference. These awkward and cumbersome ropes are now superceded by the more improved and powerful method, of the *bricoles*, which instead of drag ropes held each by several; there is attached a single bricole or rope with a hook and belt to each of several artillerists; the number of bricoles is in proportion to the calibre. See Bricoles and Prolonge. See *Amer. Mil. Lib.*

ROSETTE, an ornamental bunch of ribands, or cut leather, which was worn both by officers and soldiers in the British service, on the upper part of their cues.

Rosettes. Two small bunches of ribands that are attached to the loops by which the gorget of an officer is suspended upon his chest. The color of the riband must correspond with the facing of the uniform. The French use the same word.

ROSE-*buds*. See Nails.

ROSTER, in *military affairs*, is a plan or table, by which the duty of officers, entire battalions, squadrons, or parts of a company are regulated.

ROOM. Space; extent of space, great

or small. Any part of a building for the accommodation of individuals; as barrack room, orderly room; viz. the orderly room, mess room, guard room, soldier's rooms, and store-room, for the duty of the regiment.

ROOMS. In a military sense are those parts of a building or barrack which by specific instructions, the different barrack masters must provide, and furnish for the accommodation of the troops. A schedule as published by authority describes the number of rooms allowed in barracks for the commissioned, warrant, and non-commissioned officers, and private men, in the British service, to be as follows:

Cavalry rooms. Field officers, each two rooms; captains, each one ditto; subalterns, staff, and quarter-masters, each one ditto; the serjeants of each troop of dragoons, and the corporals of each troop of horse, one ditto; eight rank and file, one ditto; officer's mess, two ditto.

Infantry rooms. Field officers, each two ditto; captains, each one ditto; two subalterns, one ditto; staff, each one ditto; twelve non-commissioned officers, and private men, one ditto; officer's mess, two ditto; serjeant-major, and quarter-master serjeant, one ditto. When there are a sufficient number of rooms in a barrack, one may be allowed to each subaltern of infantry. See Regulations.

ROSTRAL *Crown*, *Couronne Rostrale*, Fr. A crown which was bestowed upon that Roman sailor who should first leap on board an enemy's ship.

ROSTRUM. A Latin word which literally means the beak or bill of a bird, and figuratively the prow of a vessel. There was in a public place in ancient Rome, a tribunal ornamented with various prows of ships, which the Romans had taken from the Antiati. The orators who harangued the people in public, mounted this *rostrum*. Hence the Roman phrase. To speak from above the rostra or prows.

ROUAGE, *Fr.* The wheel-work of a carriage, &c.

Bois de Rouage, *Fr.* Timber to make wheels with.

ROUANNE, *Fr.* A concave iron instrument, which is used for the purpose of enlarging the hollow of a pump. It likewise signifies a mark. An auger.

ROUANNER, *Fr.* To bore; also to make casks.

ROUE, *Fr.* a licensed libertine. One whose principles of morality are considerably relaxed, but who is not sufficiently vitiated in his manners to be excluded from society. The French make a familiar use of the term, and do not affix any degree of stigma to it. They say, on the contrary, *c'est un aimable roué*; he is an agreeable gay fellow.

ROUE, *Fr.* Wheel.

Roue *de feu*, Fr. An artificial firework. See Soleil Tournant.

Rouet, *Fr.* A small solid wheel made of steel, which was formerly fixed to the pans of blunderbusses and pistols, for the purpose of firing them off.

Arquebuses et Pistolets à Rouet, *Fr.* Blunderbusses and pistols to which a small wheel was attached. These fire-arms are very little known; some, however, are still to be found in European arsenals, kept merely for curiosity.

ROUGES, *boulets Rouges*, Fr. Red-hot balls.

ROUGH *Rider.* A person who is indispensibly necessary in every cavalry regiment. He is a sort of non-commissioned officer, and should always associate with the serjeants in preference to the private men.

Rough Riders are the assistants of the riding master, and one should always be appointed to each troop. The necessary qualifications, for every *Rough Rider* (independently of a thorough knowlege of horsemanship) are activity, zeal, and good conduct.

Every *rough rider* must provide himself with a proper jacket for the riding school business, according to the pattern fixed upon in the regiment.

To rough *horses*, a word in familiar use among the dragoons to signify the act of breaking in horses, so as to adapt them to military purposes.

To rough *it*, a cant word used among military men, signifying to face every sort of hardship.

ROULEAU, *Fr.* A cylindrical piece of wood with iron ferrels at both ends, and with mortises fitted to the end of the lever.

Rouleau *de cartouche*, Fr. A cylindrical solid piece of wood, which is used in making cartridges; by us called a Former, as it give the form to the cartridge.

ROULEAUX, *Fr.* Round bundles of fascines which are tied together. They serve to cover men, when the works are pushed close to a besieged town, or to mask the head of a work.

ROULEMENS, *Fr.* The several rolls which are beat upon a drum, as preparations for exercise, &c.

ROULER, *Fr.* To be subject to a fixed roster according to rank and precedence.

ROUND. From the French *ronde*. In *military matters*, a visitation; a personal attendance through a certain circuit of ground, to see that all is well. A round consists, in the ordinary way, of a detachment from the main-guard, of an officer or a non-commissioned officer and 6 men, who go round the rampart of a garrison, to listen if any thing be stirring without the place, and to see that the sentinels be diligent upon their duty, and all in order. In strict garrisons the rounds go every half hour. The sentinels are to challenge at a distance, and to port their arms as the *round* passes. All guards turn out, challenge, exchange the parole, and present arms, &c.

Rounds, are ordinary and extraordinary. The ordinary rounds are three: the *town major's round*, the *grand round*, and the *visiting round*.

Manner of going the Rounds. When the town major goes his *round*, he comes to the main-guard, and demands a serjeant and four or six men to escort him to the next guard; and when it is dark, one of the men is to carry a light.

As soon as the sentry at the guard perceives the *round* coming, he shall give notice to the guard, that they may be ready to turn out when ordered; and when the round is advanced within about 20 or 30 paces of the guard, he is to challenge briskly; and when he is answered by the serjeant who attends the round, *town major's round*, he is to say, *stand, round!* and port his arms: after which he is to call out immediately, *serjeant, turn out the guard! town major's round.* Upon the sentry calling the serjeant to turn out the guard, he immediately draws up the men in good order with shouldered arms, and the officer places himself at the head of it, with his sword drawn. He then orders the serjeant and four or six men to advance towards the *round*, and challenge: the serjeant of the *round* is to answer, *town major's round;* upon which the serjeant of the guard replies, *advance, serjeant, with the parole!* at the same time ordering his men to rest their arms. The serjeant of the *round* advances alone, and gives the serjeant of the guard the parole in his ear, that none else may hear it; during which period, the serjeant of the guard holds the point of his bayonet or sword at the other's breast. The serjeant of the *round* then returns to his post, whilst the serjeant of the guard, leaving his men to keep the *round* from advancing, gives the parole to his officer. This being found right, the officer orders his serjeant to return to his men; says, *advance, town major's round!* and orders the guard to port their arms; upon which the serjeant of the guard orders his men to wheel back from the centre, and form a lane, through which the town major is to pass (the escort remaining where it was) and go up to the officer and give him the parole, laying his mouth to his ear. The officer holds the point of his sword at the town major's breast while he gives him the parole.

Grand Rounds. The rounds which are gone by general officers, governors, commandants, or field officers. When there are no officers of the day on piquet, the officer of the main guard in garrison may go the grand rounds.

Visiting Rounds. Rounds gone by captains, subalterns, and the town majors of garrisons.

The grand rounds generally go at midnight; the visiting rounds at intermediate periods, between sunset and the reveille. The grand rounds receive the parole, and all other rounds give it to the guards.

There is also a species of subordinate rounds which are performed by a corporal and a file of men; and which are in reality nothing more than a *patrole*. When challenged they answer *patrole rounds*.

The governor of a garrison can order the rounds to go as often as he may judge expedient. Extraordinary rounds are resorted to when any particular event or occurrence is expected, and in cases of tumult, &c.

The going the rounds, though generally considered among the inferior duties of military discipline, ought to be most scrupulously attended to.

Turkish Rounds. The Turks are in the habit of going the rounds like other nations, for the purpose of ascertaining, whether sentries are alert and vigilant on their posts. They call the rounds *rol*. They start from the guard-house, and the person who goes them has no other weapon of defence than a stick in his hand. He is accompanied by a corporal who carries a lantern. He observes whether at his approach the sentry instantly cries out, *jedger Allah*, which signifies *good God!* If any sentry should be found asleep, or be backward in crying out *jedger Allah*, good God, he is put in prison, and there severely bastinadoed. The Turks never give a parole or countersign, in camp or in garrison.

The design of *rounds* is not only to visit the guards, and keep the sentinels alert, but likewise to discover what passes in the outworks, and beyond them.

ROUND *Robbin*. The term is a corruption of *ruban rond*, which signifies a round riband. It was usual among French officers, when they signed a remonstrance, to write their names in a circular form, so that it was impossible to ascertain who signed first. Hence to sign a *round robbin* against any person, is for any specific number of men to sign, one and all, a remonstrance against him. This usage has been perverted to the most seditious purposes of insubordination; and of itself should cause the immediate dismission of every officer concerned.

Round *Parade*. See Parades.

ROURA, *Ind.* A term used to express lord, sir, master, worship.

ROUSE. One of the bugle horn soundings for duty. It is derived from the German word which signifies *to turn out*.

ROUT. Confusion of an army or body of men defeated or dispersed.

To Rout, *to put to the* Rout. To defeat, to throw into confusion, &c.

ROUTE, (*Route*, Fr.) in *military matters*, an order to direct troops to march, the road they are to take, and an authority to the magistrates to provide quarters for them.

Pas de Route, *Fr.* Stepping at ease, or marching with the least possible restraint.

Marche Route, *Fr.* Route of march. The French use this term in contradistinction to *marche manœuvre;* march in manœuvring.

ROUTIER, *Fr.* A ruttier. The French say figuratively *c'est un vieux routier;* he is an old stager.

ROUTINE, *Fr.* This word has been adopted by us in the same sense that it is familiarly used by the French. It signifies capacity, or the faculty of arranging; a certain method in business, civil or military, which is as much acquired by habit and practice as by regular study and rule. We say familiarly the routine of business.

ROUVERIN, *Fr.* Brittle iron, such as easily breaks when it is committed to the forge.

ROWANNA, *Ind.* A passport or certificate from the collector of the customs; or any other passport.

ROWEL. The pointed part of a horseman's spur, which is made in a circular form, with rays or points like a star.

ROXANA, *Ind.* An Indian term expressive of great magnificence, resplendence.

ROY, *Ind.* A Hindoo name for an officer of the finances.

ROYAL *parapet,* in *fortification,* a bank about three toises broad, and six feet high, placed upon the brink of the rampart, towards the enemy: its use is to cover those who defend the rampart.

Royal *academy.* See Academy.

Royal *Military College* See School.

ROYALS, in *artillery,* are a kind of small mortars, which carry a shell whose diameter is 5.5 inches. They are mounted on beds the same as other mortars.

ROZEENDAR, *Ind.* A person holding a yearly pension.

ROZENADAR, *Ind.* One who receives an allowance daily.

ROZENAMA, *Ind.* A day-book.

RUBBY, *Ind.* A division of the year, containing the months of *Chaite* or 3d month, from the 11th of March to the 10th of April. *Bysac* or 4th month, from the 11th of April to the 11th of May. *Jeet* or 5th month. *Assaf* or 6th month, from the 12th of June to the 13th of July. *Savan* or 7th month, in some manner, agrees with July and August. *Baudboon,* or the same as *Jeet,* from the 11th of May to the 12th of June. The other half of the year is called *Kureef.*

RUDIMENTS. The first principles, the elements of any particular science. Hence—

Rudiments *of War.* The first principles or elements of war; as marching, facing, wheeling; the drill, manual, and platoon exercises, manœuvres, &c. &c.

RUE, *Fr.* Street.

RUFFLE. A term used among the drummers to signify a sort of vibrating sound, which is made upon a drum, and is less loud than the roll.

To beat a Ruffle. To make a low vibrating noise upon the drum. It is generally practised in paying a military compliment to a general officer, and at military funerals.

In the British army a lieutenant-general is entitled to three ruffles.

A major-general to two ruffles.

A brigadier-general to one ruffle.

RUG, (*couverture velue,* Fr.) A coarse nappy coverlet used for mean beds. Each set of bedding which is provided for regimental hospitals has one rug.

RUILLER, *Fr.* To establish marks for the purpose of rendering surfaces and places correct.

RUINE, *Fr.* Literally signifies ruin. It is used by the French in a warlike sense.

Battre en Ruine, *Fr.* To defeat an enemy in such a manner as to destroy all means of taking the field again.

RUINES, *Fr.* Ruins.

RULE, in a general sense, government, sway, empire. In a more confined one, canon, precept, direction. Hence rules and regulations for the government of the army.

To Rule. To govern, to command.

RULE, } an instrument by which
RULER, } lines are drawn.

RULES *and Articles.* Under this term may be considered the military code or laws of the United States, and the regulations issued by the War Office.

RULES *and Regulations.* See Regulations.

RUMB *de vent,* Fr. Point of the compass.

Rumb *or Rum,* Fr. The hold of a ship.

RUMOR, a desultory, loose report of what may, or may not be.

To spread false Rumors, to circulate things without the foundation of reality. Reports, &c. are sometimes circulated by means of spies, deserters, &c. for the purpose of covering some particular design, or intended operation. Rumors of this kind should be cautiously listened to by the commanding officer of the army through which they are spread. It sometimes happens that individuals, through wantonness, or from some other motive, create alarms among their own people, by anticipating some looked for or dreaded event. This offence is not only punishable by the civil law, but, being contrary to good order and discipline, is rigidly so in every army. A singular circumstance of this kind occurred at Colchester, England, in 1797. During the alarm which universally prevailed at that time, especially along the coast of Essex, a serjeant belonging to a militia regiment, unwittingly, for it is not supposed he did it wilfully, said in the hearing of some soldiers, that the *French would dine at Ipswich on the Sunday following!* This expression soon spread among the inhabitants of the place, and a formal complaint was made to the general of the district. The offender having originally belonged to the line, and bearing the best of characters, was so far considered, as not to be tried by a general court-martial; but, for the sake of example, he was ordered to be escorted to the church nearest to the coast, and on a Sunday to appear in the porch, and there ask pardon of the inhabitants for the alarm he had created.

To RUN *the gantlope*, (that is the *gauntlet*) to undergo a punishment which has been allotted for considerable offences in some foreign countries. When a soldier is sentenced to run the gantlope, the regiment is drawn out in two ranks facing each other: each soldier, having a switch in each hand, lashes the criminal as he runs along naked from the waist upwards. While he runs, the drums beat at each end of the ranks. Sometimes he runs 3, 5, or 7 times, according to the nature of the offence. The major is on horseback, and takes care that each soldier strikes the culprit.

RUNNING-*fire*. See FIRE.

RUPEE, a silver coin which varies in its value according to the part of India in which it is current. *Rupees* struck by the English, are generally worth half a dollar.

RUPTURE, a disease which disqualifies a man from being admitted as a soldier; but as some men are capable of producing and reducing a rupture with great ease, they should not be discharged in slight cases, as by the use of a truss they may be enabled to do duty for a long time.

RUPTURE. This word also signifies the commencement of hostilities between any two or more powers.

RUSE, *Fr.* Cunning, trick, ingenuity. It is applied to military matters, and signifies stratagem.

RUSER, *Fr.* To make use of stratagems: *Il est permis de Ruser à la guerre;* it is lawful to make use of stratagems in war.

RUSES *de guerre*, Fr. Stratagems of war. See STRATAGEMS.

RUSSOOT, *Ind.* A tribe of Hindoos, whose particular duty is the care of horses.

RUSSUMDAR, *Ind.* A person deriving a particular perquisite.

RUSTRE, *Fr.* A lance so called, which was formerly used in tournaments.

RUTTIER. A direction of the road or course at sea.

RYET *or Ryot*, Ind. The general name given in India to cultivators of the ground.

RYET *or Ryot Lands*, Ind. Lands farmed out and cultivated by a tenant.

S

SABLE, *Fr.* Sand.

SABLONIERE *or* SABLIERE. A spot from which sand is drawn. It likewise means a sand-pit.

SABORD, *Fr.* a port-hole.

SABRE, (*Sabre*, Fr.) a kind of sword, or scimetar, with a very broad and heavy blade, thick at the back, and of a shape falcated, or curved, but sharp at the point. It is generally worn by heavy cavalry and dragoons. The grenadiers, belonging to the whole of the French infantry, are likewise armed with sabres. The blade is not so long as that of a small sword, but it is nearly twice as broad. French hussars wear the curved sabres somewhat longer than those of the grenadiers. The broad straight sword is best adapted for infantry of every kind.

SABRE-*Tasche*. From the German *sabel*, sabre, and *tasche*, pocket. An appointment or part of accoutrement of hussars, which consists of a pocket which is suspended from the sword-belt on the left side, by three slings to correspond with the belt. It is usually of an oblong shape, scolloped at the bottom, with a device in the centre, and a broad lace round the edge. The color of it always corresponds with that of the uniform.

SABRER, *Fr.* To cut to pieces.

SAC *d'une ville*, Fr. The storming and plunder of a town.

Mettre une ville à SAC, *Fr.* To give a town up to the plunder of the soldiers.

SAC, *Fr.* a bag

SAC *à poudre*, Fr. A bag of gunpowder. These bags are frequently used in war, for the purpose of intimidating an enemy, and of setting fire to places. They are of different sizes and dimensions; some to be thrown by the hand, and others out of a mortar. A French work, intituled *le Bombardier François*, gives a full account of both.

SAC *à terre*, Fr. Sand-bags, or bags filled with earth.

SAC *à amorce*, Fr. A small leathern bag which is used for the purpose of carrying gunpowder to the different batteries to prime the pieces.

SAC *à laine* Fr. A bag made of or stuffed with wool and other soft materials. It is larger than a sand-bag. Every army should be provided with a certain quantity of these bags, in order to supply the want of soil on critical occasions.

Un havre SAC. A knapsack. See HAVRESACK.

Cul de SAC, *Fr.* A street or passage that has no outlet.

SACCADE, *Fr.* In the manege, a violent check or jirk, which the horseman gives his horse by drawing both the reins very suddenly. This is practised when the horse bears too heavy on the hand; but it ought to be done with great caution, as the frequency of it must eventually spoil the horse's mouth.

SACHET, *Fr.* A pouch. It likewise signifies a bag in the diminutive sense. A satchel

Sachets *de mitrailles*, Fr. Small bags filled with grape-shot, which are afterwards fired from cannon, or thrown out of mortars.

Sachets *de ballas de plomb*, Fr. Bags of bullets.

SACKS. See Bags.

SACKERS. They who sack a town.

SACRE *ou Sacret*, Fr. A name formerly given to pieces of ordnance that carried balls of 4 to 5lb. weight. Each piece weighed from two thousand five hundred to two thousand eight hundred pounds. The same as Saker.

SADDLE. The seat which is put upon a horse for the accommodation of the rider.

SAFE-*guard*, in *military affairs*, a protection granted by a general, for some of the enemy's lands, houses, persons, &c. to preserve them from being insulted or plundered. See Guard.

SAFYNAMA, *Ind.* A certificate or writing, specifying any matter of dispute, which it is found necessary to have settled or cleared up

SAGITTAL, belonging to an arrow.

SAGITTARIUS, *or* SAGITTARY. See Archer, Bowman.

SAGO, *Ind.* A tree of the palm species. A flour is made from this tree, which formed into bread and fresh baked, eats like hot rolls; when it grows stale it becomes hard, and requires to be soaked in water before it can be used. Three of the trees are found sufficient to give sustenance for one man during a whole year; and an acre properly planted, will supply food for one hundred for that period.

SAGUM. A woollen garment, which was formerly worn by the Roman soldiers when they took the field. It is said that the Gauls adopted the use of it.

SAH, *Ind.* A banker.

SAHEB, *Ind.* (pronounced *Saib.*)—Master, sir.

SAHOOKER, *Ind.* A merchant.

SAIGNEE *du fossé*, Fr. The act of drawing off the water which is in the ditch or fosse of a town or fortified place. When this has been executed, clays or hurdles covered with earth, or bridges made with reeds, must be thrown upon the mud, to establish a firm footing.

Saigner *de saucisson*, Fr. The act of cutting off a part of a linen saucisson, which is filled with gunpowder, for the purpose of introducing the moine or cylindrical tube, in order to set fire to a mine.

SAIGNER *une piéce*, Fr. An expression used in artillery when a piece of ordnance, which is mounted on a carriage, has its breech carried away by the violence of the explosion. This sometimes happens when the discharge is made directly downwards, or from top to bottom.

Saigner *une Rivière*, Fr To turn the current of a river, by partially drawing off some of its water.

SAILLANT, *Fr.* Salient. See Salient Angle. This word, as well as *Saillie*, signifies generally any part of a building that does not run up perpendicularly from its base, but projects or slopes out.

St. GEORGE's *Guard*, a guard of the broadsword or sabre, used in warding off blows directed against the head. See Broadsword.

La SAINTE *barbe*, Fr. The gunner's room.

SAKER, an old word for *cannon*. It carried a shot of five pounds and a quarter weight: the diameter of the bore was three inches and 9-16ths; the length eight or nine feet. See Cannon.

SALADE, *Fr.* This word literally means sallad. It likewise signifies a head piece. The French use it frequently in a figurative sense, viz.

Donner une Salade *à quelqu'un*, Fr. To give any one a good dressing.

Régiment de Salade, *Fr.* A term of ridicule which the French frequently applied to small new-raised corps; such as independent companies which were levied for rank only.

SALE. State of being venal; price.

Sale *of Commissions.* The sale and purchase of commissions is of general usage in the British service. Commissions in the British army are sold for various purposes; sometimes to indemnify individuals for their original purchase; sometimes, as was shewn in 1809, as the fund for paying princely prostitutes.

SALIENT *angle*, in *fortification*, that whose points turn from the centre of the place. See Fortification.

SALLE *d'armes*, Fr. A fencing school.

Salle *d'armes dans un magazin*, Fr. An armory or particular room where fire-arms, &c. are regularly disposed. Of this description is the armory in the Tower.

SALLESEE, *Ind.* Arbitration.

SALLIS, *Ind.* An arbitrator.

SALLY. See Siege.

Sally-*ports*, or *postern-gates*, as they are sometimes called, are those underground passages, which lead from the inner to the outward works; such as from the higher flank to the lower, to the tenailles, or the communication from the middle of the curtain to the ravelin. When they are constructed for the passage of men only, they are made with steps at the entrance and outlet. They are about six feet wide, and 8 1-2 feet high. There is also a gutter or sewer made under the *sally-ports* that are in the middle of the curtains, in order that the water which runs down the streets may pass into the ditch; but this can only be done when they are wet ditches. When *sally-ports* serve to carry guns through them for the out-works, instead of making them with steps, they must have a gradual slope, and be eight feet wide.

SALA-MA-NAZEER, *Ind.* The salutation of victory.

SALOOTER, *Ind.* A farrier.

SALOOTEREE, *Ind.* The business of a farrier.

SALTING-*boxes*, in *artillery*, are boxes of about four inches high, and 2 1-2 in diameter, for holding mealed powder, to sprinkle the fuzes of shells, that they may take fire from the blast of the powder in the chamber; but it has been found that the fuze takes fire as well without this operation, so that these *boxes* are now laid aside.

SALTPETRE, *Fr.* See Nitre.

SALTPETRE, or nitre, the principal ingredient for making gunpowder; it is found in great plenty in some of the East-India provinces, and in some parts of Europe. The necessities of the French revolution, when attacked by all Europe, forced the French to have recourse to their chemists, to supply nitre which could not be obtained from abroad; they scraped the walls and floors of their cellars and vaults, and out of the washed earth extracted nitre; they also extracted nitre from vegetable substances, such as the horse chesnut. In some natural caves discovered in *Kentucky*, vast quantities, sufficient for every demand of war and commerce can be procured. See Gunpowder, Nitre, &c.

SALPETRIERE, *Fr.* A particular spot in an arsenal where there are pits, &c. for the purpose of making saltpetre.

SALPETRIERS, *Fr.* Men employed in making saltpetre.

SALVE, *Fr.* A salute, a volley. It generally means a discharge of heavy ordnance and other firearms in concert.

Saluer *de la mousqueterie*, Fr. To fire a volley, or discharge of musquetry only.

Saluer *du canon*, Fr. To salute by the discharge of ordnance.

Saluer *de la voix*, Fr. To huzza. To cry out, as *vive le roi!* God save the king! *vive la république!* long live the republic! This manner of saluting generally appertains to the mob of a country, which lavishes its applause upon every man that happens to be in power. It has, however, been customary, both in Rome, Greece, France, and other countries, for whole battalions of soldiers to salute *à vive voix;* in which case they generally take off their hats, and give three huzzas.

Saluer *du pavillon*, Fr. To salute with the colors.

Saluer *à boulet*, Fr. To salute with ball.

SALUT, *Fr.* The salute.

Salut *du sponton*, Fr. The spontoon salute.

Salut *de l'épée*, Fr. The sword salute.

Salut *de mer*, Fr. The deference and respect which are shewn at sea by ships of inferior force to those of superior rate. This is done by lowering the flag. The British flag claims to be paramount to all others, and requires to be saluted by foreign ships at sea. This salute has been made the subject of clauses in treaties.

SALUTE, a discharge of artillery, or small arms, or both, in honor of some person; the men presenting their arms. The colors salute chief magistrates, and generals commanding in chief; which is done by lowering the point within one inch of the ground. In the field, when a regiment is to be reviewed by a general, the drums beat a march as he passes along the line, and the officers salute one after another, pointing their swords downwards. The ensigns salute together, by lowering their colors. When the word of command *to shoulder*, is given, the officers recover their swords, and the ensigns raise the colors.

SAMBUCUS, (*Sambuque*, Fr.) An ancient musical instrument of the wind kind, resembling a flute. It probably derives its name from Sambucus, the Elder tree; being made of that wood.

Sambucus was also the name of an ancient engine of war used by Marcellus in besieging Syracuse. Plutarch relates that two ships were required to carry it. A minute description of this engine may be seen in Polybius.

SAMPODAR, *Ind.* A treasurer or cashkeeper.

SAND, in *military architecture*. The best sand for good mortar, is that whose grain is not too small, and must be clear of the earthy particles. Sand found in rivers is esteemed the best, as having a coarse grain, and being free from earth and mud. See Mortar.

SAND *bags*. See Bags.

Sand bags are made about 27 inches long, and 15 diameter; 250 of these are required for each fathom of battery, or about 1680 for two guns or mortars. See Tonnage.

SANGIAC. A situation or appointment of dignity in Turkey. The Sangiacs are governors of towns or cantons, and take rank immediately after the *Beglerbeys*, who are viceroys in that country, and give the name of *Beglerbat* or *Beglerbey* to a militia which they support at their own expence.

SANS-*Culotte*, Fr. A revolutionary term which was first given by the French to the national guards; it was an unfortunate effusion of contempt expressed by the queen as the militia passed along; it soon became known, and was calculated to increase popular antipathy against her. It means, literally, a man without breeches.

SAP, (*Sappe*, Fr.) in *sieges*, is a trench, or an approach made under cover, ten or twelve feet broad, when the besiegers come near the place, and the fire from the garrison grows so dangerous, that they are not able to approach uncovered.

There are several sorts of *saps*: the single, which has only a single parapet; the double, having one on each side; and the flying, made with gabions, &c. In all *saps*, traverses are left to cover the men.

The sap generally commences about the second parallel, and sometimes sooner; and if the fire of the besieged is much slackened, may proceed both day and night. The sappers are usually divided into brigades of 8, and sub-divided into divisions of 4 each; being the greatest number that can work at the sap at the same time. The leading sapper excavates 18 inches deep, and as much wide; the second, third, and fourth deepen the trench, each in succession 6 inches, and widen it as much; so that the four make a trench of 3 feet wide and three feet deep; after which the common workmen follow, and increase it in breadth and depth equal to the other trenches. The sap may proceed at the rate of 80 fathoms in 24 hours. As this work is very hard, the half brigades relieve each other every hour, and each sapper in his turn takes the lead. The whole brigade is relieved at the end of 6 hours. It is always customary in this dangerous work, to give the pay of those that are killed to the survivors. Sappers are generally armed with a helmet and breast plate. See TRENCHES, PARALLELS.

SAPPERS, (*Sappeurs*, Fr.) are soldiers belonging to the artificers or engineers, whose business it is to work at the saps, and for which they have an extraordinary pay. A brigade of *sappers* generally consists of eight men, divided equally into two parties. Whilst one of these parties is advancing the sap, the other is furnishing the gabions, fascines, and other necessary implements; they relieve each other alternately

SARISSA, the Pike.

SAROT, *Fr.* A sort of frock which was worn by the drivers of mules, and other persons employed in the French armies.

SARRAZINE, *Fr.* See HERSE.

SARDAR, *Ind.* A chief, a leader.

SARAT. The breaking up or ending of the rains, is so called in India.

SASCE, *Ind* The moon.

SASH. A mark of distinction, generally made of crimson silk for the officers, and of crimson mixed with white cotton for the serjeants. It is worn round the waist. Sashes are erroneously said to have been invented for the convenience and ease of wounded officers, in case any of them were so badly wounded, as to render them incapable of remaining at their posts, they might be carried off with the assistance of two men; but though they may have been so used, they are only an ancient remnant of military ornament, and correspond with the *kummerbaund*, worn by all Asiatics even to this day; they are of considerable use to the soldier during fatigues or marches; and the "girding up the loins," as noted in scripture, would be found now not an unwise practice for the soldier in action. The American cavalry tie the sash on the left; the infantry on the right side. The sashes for the Austrian army are of crimson and gold; the Prussian army, black silk and silver; the Hanoverian were yellow silk; the Portugueze, crimson silk, with blue tassels. The modern French have their sashes made of three colors, viz. white, pink, and light blue, to correspond with the national flag.

SATELLITE, (*Satellite*, Fr.) A person who attends on another, either for his safety, or to be ready to execute his pleasure.

SATELLITES, *Fr.* Certain armed men, of whom mention is made in the history of Philip Augustus, king of France. The word satellite itself, which we frequently find in ancient historians, signifies a guard or attendant about the person of a prince. It is derived from the Latin word *satelles*, which comes from the Syriac term for a companion. The satellites of Philip Augustus were men selected from the militia of the country, who fought on foot and horseback. The servants or batmen who attended the military knights when they went into action, were likewise called *satellites*, and fought in their defence mounted or on foot.

SATISFACTION. When an officer or other person goes out to fight a duel with one whom he has offended, or by whom he has been offended, he is said to *give* or *take* satisfaction!

SAUCISSE, } in *mining*, is a long
SAUCISSON, } pipe or bag, made of cloth well pitched, or sometimes of leather, of about 1½ inch diameter, filled with powder, going from the chamber of the mine to the entrance of the gallery. It is generally placed in a wooden pipe, called an *auget*, to prevent its growing damp. It serves to give fire to mines, caissons, bomb chests, &c.

SAUCISSON, is likewise a kind of fascine, longer than the common ones; it serves to raise batteries, and to repair breaches. Saucissons are also used in making epaulements, in stopping passages, and in making traverses over a wet ditch, &c.

SAUCISSON *de brulot*, Fr. A machine made use of to set fire to the different compartments in a fire-ship.

SAUCISSONS *d'artifice*, Fr. Saucissons used in artificial fireworks.

SAUCISSONS *volans*, Fr. Flying saucissons; a species of sky-rocket.

SAUF-*conduit*. A pass.

SAUT, *Ind.* An hour.

SAUT, *Fr.* This word is used in hydraulics to signify a considerable fall of water, such as the falls of Niagara, &c.

SAUTER, *Fr.* To leap.

Sauter *a l'arbordage*, Fr. To leap upon the deck, or on any part of an enemy's ship, for the purpose of boarding her.

Sauter *en selle*, Fr. To get on horseback. To jump upon your saddle.

SAUVE-*garde*, Fr. Safe-guard. Protection.

Accorder des Sauve-*gardes*, Fr. To grant protections.

Envoyer une garde en Sauve-*garde*, Fr. To send out a party for the purpose of escorting persons, or of protecting any particular quarter.

Sauve *qui peut!* Fr. Let those escape that can. This expression is familiar to the French, it was employed in an early part of the revolution, by the royalists to produce panic in the ranks of the revolutionary army; and was used with success particularly in the corps under gen. Dillon in Flanders.

SAVAN, *Ind.* The name of an Indian month, which corresponds with July.

SAW. A dentated steel instrument with which wood or metal is cut by attrition. Each pioneer is provided with one.

SAYON, *Fr.* A kind of coarse habit in which soldiers were formerly clothed among the French.

SCABBARD, (*Fourreau*, Fr.) A case commonly made of black leather, with a ferrel at the end, in which a sword, sabre, &c. may be sheathed.

Bayonet Scabbard. A leathern sheath made in a triangular form to correspond with the shape of the bayonet.

Scabbard-*button*. A brass button or hook by which the scabbard is attached to the frog of the belt.

The word *scabbard* has been sometimes used in a figurative sense to distinguish those persons who have obtained rank and promotion in the army without seeing much hard service, from those who have fought their way through all the obstacles of superior interest, &c. Hence the favourite expression of the late sir William Erskine—*Some rise by the scabbard, and some by the sword!* Which means *more* than we are at liberty to illustrate, but which may be easily applied to *cases in point*.

SCALADE, from the French *Escalade*, a furious attack upon a wall or rampart, contrary to form, and with no regularity, frequently carried on with ladders, to insult the wall by open force.

SCALE, a right line divided into equal parts, representing miles, fathoms, paces, feet, inches, &c. used in making plans upon paper; giving each line its true length, &c. See also Balance, Escalade, &c.

SCALENE, *Fr.* A term used in geometry to express a triangle whose three sides and three angels are unequal to one another.

SCALING-*ladder*. See Ladders.

SCALLOP, any segment of a circle.

To SCALP. To deprive the scull of its integuments. A barbarous custom in practice amongst the Indian warriors, of taking off the tops of the scalps of the enemies sculls with their hair on. They preserve them as trophies of their victories, and are rewarded by their chiefs, according to the number they bring in.

To SCAMPER, (*Escamper*, Fr.) To run away precipitately.

SCARF. See Sash.

SCARLET, the national color for the dress of the British. The British artillery, cavalry, and some of the light infantry, are clothed in blue; rifle corps in green; and the cavalry for foreign service in light blue. See Uniform.

SCARPE. See Escarpe.

SCENOGRAPHY, (*Scenographe*, Fr.) The representation of a building, town, &c. as it appears in prospective or from without, with all its dimensions and shadows.

SCHEDULE, an inventory, a list; also something referred to by numbers or letters; as the oaths of the recruit and magistrate, marked A and B at the end of the mutiny act.

SCHOOL, (*école*, Fr.) A house of discipline and instruction; a place of literary education; an university. It is a more general and comprehensive term than college or academy. The French have made a great distinction on this head with respect to their military institutions. Thus the great receptacle for military genius was called *L'école Militaire de Paris;* the military school of Paris; whereas the subordinate places of instructions and the preparatory houses, were termed colleges, viz. colleges de Soreze, Brienne, Tivon, Rebais, Beaumont, Pont-le-roy, Vendome, Effiat, Pont-a-Mousson, Tournon.

British Royal Military School or College.

A new institution under the direction of the commander in chief, for the time being.

This establishment consists of two departments:—

The first, or senior department, is calculated to instruct officers, who have already acquired a sufficient knowlege of regimental duties, &c. in the higher branches of their profession. Their attention is particularly directed to those functions which relate to the quarter-master-general's department in the field.

The second, or junior department, is meant for the education of young men, who have not yet received any commissions in the army, but who are intended from early life for the profession of arms.

The following particulars constitute the general outline of this praise-worthy institution:—

The commander in chief for the time

being is always to be considered as the chief governor of the establishment. He is president of the supreme board of the college; the members of which are the secretary at war, and such general and staff officers as the king may, from time to time, nominate. It is their peculiar province to see, that the regulations of the institution be duly observed, and unequivocally fulfilled, and that the whole be conducted with economy and credit to the country.

There is constantly resident in the college a governor and a lieutenant-governor, who must both be military officers. The former not under the rank of major-general, and the latter not under that of lieutenant-colonel in the line. These are the immediate functionaries of the place, and to them is intrusted the entire direction of the establishment; subject only to the instructions and orders that may occasionally be issued from the supreme board of the college.

At the head of each department are placed a commandant and a director of instruction. These must likewise be military men, and bear the king's commission. They are at all times accountable for their respective departments, being under the immediate control of the governor and lieutenant-governor of the college.

The commandants of departments, in conjunction with the directors of instruction, form a collegiate board, at which the resident governor, or, in his absence, the lieutenant-governor constantly presides

Public examinations are made, at stated periods, by this board, in order to ascertain the progress of learning, and the degrees of improvement. The president and members of it likewise enter into the interior economy of the place, control the expenditure of the establishment, and maintain the statutes of the college; subject nevertheless to the control and occasional direction of the supreme board, to which the collegiate one is in every respect subordinate.

The staff and other officers of each department are under the immediate orders of their respective commandants, who are enjoined to conduct their departments in strict conformity to the existing rules and discipline.

The establishment is founded upon principles of the strictest economy; and the expence of being at the institution, with all the advantages of theoretical instruction and practical improvement, does not exceed the necessary charges and disbursements to which every officer is subject when he lives with his regiment.

It is a standing order of the institution, that officers must constantly appear in uniform; and they must in all respects conform to the rules and regulations.

Leave of absence is granted, during the months of December and January, to officers studying in the senior department of the college; but at no other season of the year, except for a few days, and then only under circumstances and in cases of urgent necessity.

Senior department.

The number of officers which can be admitted, at a time, to the studies of the senior department, is limited to 30; and it is required, as indispensibly necessary, that they should be perfectly conversant in all the details of regimental duty.

They must likewise have made themselves masters of the French language, be versed in mathematics, and in the science of field fortification and castrametation; and be well instructed in the drawing of military plans, &c.

Every thing which relates to the different branches belonging to the senior department, is conveyed in French, in order that officers may be enabled to improve the knowlege they acquire at the establishment, by reading with facility, the military writers that are most in estimation. The majority of such authors being found among the French, that language is, of course, most cultivated; by which means the first object of acquirement will not only be obtained, but will ensure to the general staff of the army a disposable body of intelligent officers, that are conversant in a continental tongue.

The instruction is not elementary or given upon first principles only. The attention of the officers is directed to higher branches, and the lessons they receive are exemplified by practice in the field; by taking ground, &c.

The particular and more immediate duties, appertaining to the general staff, to which the faculties of the mind are principally applied, consist in taking (*à coup d'œil*, or at sight) military surveys of ground without any mechanical process, or aid of instruments; and to express the same on paper with the most accurate perspicuity.

It is, therefore, necessary that the officers of the senior department should be able to judge of the advantages and disadvantages of ground relative to offensive and defensive operations; to employ geometrical and trigonometrical operations on the ground; to chuse the scite or position of entrenchments and batteries, by which every part of a camp may be defended, and its leading avenues, &c. put *à l'abri de surprises*. They must likewise be masters of a theory which may be adapted to every case in which field fortification can be employed: to trace camps on the ground, and to prick out the lines of entrenchments, &c. with dispatch and accuracy, in conformity to the strict rules of castrametation: to be thoroughly conversant in the theory of camp out-duties, and of the grand guards of armies: to know how to reconnoitre ground for a given number of columns moving in route of march, and to place or distribute the same with attention to the conveniences of forage and water, and to the security of the magazines.

To reconnoitre the route of a column in *advancing*, to estimate the labor of opening the several communications, to calculate the number of artificers that are requisite, and the time that is necessary to clear the route for the march of a column, and to detail the same in an accurate manner upon paper.

To reconnoitre the route of a column in *retreat*, specifying, in a clear and succinct manner upon paper, the several points in retreat that are favorable to each arm composing the rear guard, when they may halt, and act as covering parties to the retreating column.

To reconnoitre and take up ground for a given number of troops on a *defensive* position, and to place the same; to establish a chain of posts, to construct batteries, throw up abbatis, and other means of defence, adapted to the particular circumstances of the ground made choice of for the position.

To reconnoitre the ground upon which any given number of troops might be encamped under circumstances of aggression. In taking this position for the purpose of acting *offensively*, particular attention must be paid to the future movements of the army, by providing the readiest means of directing and supporting its operations.

Marches and movements constitute so essential a branch in military tactics, that on them almost wholly depends the issue of a campaign. It is consequently expected, that every officer belonging to the senior department, should be able to calculate the march of a column under all the various and desultory circumstances which are attendant on the movements of troops. He must accurately ascertain the ground, the defiles, the width of roads, &c. the length of the several columns.—The hours occupied in marching, defiling, passing obstacles, &c. must come within this calculation.

It must be remarked, that this is a route of march which has in view only to convey a body of troops from one position to another, without being connected with military operations relative to the enemy

To calculate the march of several columns with respect to each other.

To reconnoitre routes for the march of several columns *in advancing*; to form the columns of march so as to correspond with the field of battle which they are to occupy, and to point out the routes by which they are severally to arrive. The remark which we have already made applies to this part likewise.

To regulate an order of march, and to ascertain the arrival of several columns on the field, with regard to the appropriate manner of deploying, and their relative dispositions, whether with a view to their encamping, or to forming in order of battle.

To reconnoitre routes for the march of several columns in *retreat*, for the purpose of forming columns of march according to the circumstances of the retreat, and in conformity to the ground to which they retire.

To regulate the retreat and relative support of the rear guards attached to the several columns.

In order to add practical knowlege to theory, and to adapt the observations of established military writers to local experience, every survey or reconnoitring of country, for the retreat or advance of columns; for offensive or defensive positions; for encampments, or the construction and erection of batteries, &c. is made upon spots that are actually in the neighborhood of the establishment; and every object of instruction is applied to the local circumstance of the ground as it actually exists. It is required, that plans of these different surveys, &c. should at all times accompany and be given in with the lesson of instruction.

Officers of the senior department must not only be well acquainted with these particulars, but they must further know how to regulate the cantonments of an army.

To estimate the resources of a country, in green and dry forage, in cattle, grain, horses, and carriages, together with the population.

To draw out plans of resources, general plans of operations and subordinate ones of position, and of cantonments.

According to the season of the year, and the state of the weather, officers are employed in acquiring the theory, or applying in practice on the ground, the several points of instruction to which their attention has been directed.

It is required of them, individually, to reconnoitre a given tract or line of country.

The military positions they take up, as well as the disposition they make of troops, whether in camp or in order of march, are invariably represented by plans in drawing, and all instruction is exemplified by applications which are made in the field, and are adapted to the local circumstances of ground. In order to render the different lessons familiar to the mind, and to make them practically easy, imaginary marches are made from one supposed camp to another, and the various orders which relate to the movements of troops are given out and explained, as if they were to be actually carried into effect. Points of attack or defence are taken up, ambuscades are laid, and all the chicane of what the French so justly call *le petite guerre*, is entered into with as much promptitude and caution, as if the enemy were in the neighborhood of the college. The manoeuvres of light troops are particularly practised; and the different instructions which have been published in French on that branch of military tactics by Mons. Jarry, are practically taught, as time and circumstances permit.

The elements of field fortification, and the higher branches of attack and defence, are not only inculcated with the greatest perspicuity, but they are reduced to practice by imaginary lines of circumvallation and contravallation; by posts and positions suddenly taken, and quickly fortified; whilst the manifold feints and stratagems of war which have been practised by the best generals, are locally attempted, for the double purpose of applying practice to established facts, and of seizing some new idea that may grow out of ancient practice.

Whenever an officer has completed his studies, he is reported to the commander in chief, as having qualified himself for the quarter-master-general's department; and returns to his regiment, having had his name previously registered at the college, in order that he may be employed on the general staff of the army when his services are required.

When an officer wishes to be admitted to the military college, his application must be addressed to the commander in chief, for the time being, through the medium of the colonel or commanding officer of his regiment, who sends it, under cover, to the official or public secretary at the Horse-Guards, with his own certificate of the good conduct of the applicant.

When an officer, thus admitted, is found deficient in any of the branches of elementary knowlege, which he is expected to have acquired previous to his entrance into the senior department, he may have the advantage of instruction from the professors and masters of the junior department. It would, however, be more gratifying to all parties, were such officers to qualify themselves before they quit their corps.

The same allowances which are established for troops in barracks, are made to officers who attend the instructions of the senior department.

Every officer admitted to this department is required to have a horse to attend his duty in the field, and regular rations of forage, &c. are issued to him for his keeping.

The officers of the senior department mess together, and their table is regulated by specific statutes of the college.

Junior department.

This department is calculated to receive three hundred students from the age of fourteen to sixteen. Fifty out of this number may be cadets of the hon. East India company's service; one hundred the sons of noblemen and gentlemen who are intended for the army; one hundred the sons of officers actually in the service; and fifty the sons of officers who have died, or have been disabled in his majesty's service, and are left in pecuniary distress.

The students are formed into four companies; and proper persons are appointed for their care and superintendance.

They are to wear an established uniform, and to be conducted as a military body; regard being had to their youth, and certain instructions adapted for its government.

The course of study which is arranged for this department is of a preparatory nature, leading gradually to branches of a higher class that are fitted for the staff; and adding to classical knowlege, every accomplishment that is required to form the character of a perfect gentleman and officer.

The students are taught the several branches of mathematics, field fortification, together with the general principles of gunnery and artillery service. They are instructed in drawing military plans, military movements, and perspective.—They are also made acquainted with the first rudiments of war, the science of military manœuvre, with geography and history, as well as with the German and French languages. Professors and masters are appointed to teach the Hindoo and Persian tongues, as being immediately necessary to the service of India.—Masters are likewise provided to instruct cadets in the geography of India, and to make them familiarly acquainted with the local knowlege of the settlement for which they are severally intended.

The directors of instruction are made particularly responsible for the proper management of the studies, and different elementary branches which constitute an essential part of the establishment.

The professors and masters are employed generally to instruct in both departments, under the control of the chief director.

The whole establishment, which has military knowlege and improvement for its basis, is conducted upon strict military principles, and in scrupulous conformity to the rules and discipline which are issued by authority for the government of the army at large

A sufficient number of masters are constantly resident in the college, for the instruction of such students as may wish to continue their classical studies. Frequent lessons are given them on moral and natural philosophy

They are likewise taught riding, swimming, fencing, and the sabre and sword exercise.

The instruction of the department is divided into two parts, forming a junior and senior division of study.

Public examinations are held in this department, in order to remove students from the lower to the higher division of study; and also for the purpose of granting certificates to such as are qualified to act as commissioned officers in the service, at an age under what is required by the present regulations of the army.

From this department students will join the regiments into which they severally enter; and after having obtained some experience, by going through the different duties of a regimental officer, they will be qualified to return to the college, and to enter into the senior department, if they are disposed to study the service of the general staff.

The public examinations are held in presence of one or more visitors or inspectors, nominated by the commander in chief; and it is required, that they should be members of the supreme board of the college.

The expence attending the education of a young gentleman in this department, is according to the foundation on which he is admitted to the college.

The sons of noblemen and gentlemen pay 80*l*. per annum.

The sons of officers in service pay 40*l*. per annum; and orphans, who are the sons of officers that have died in the service, or the sons of those that have been disabled and are straitened in circumstances, are educated, clothed, and maintained free of all expence.

The board, clothing, and accommodation, are included in the several sums above specified.

There are two vacations in the course of twelve months, viz —At Christmas and Midsummer, for a term not exceeding one month each vacation.

The administration of the funds of the establishment, is under the direction of the collegiate board.

The accounts are balanced at the expiration of six months in every year, and are laid before the supreme board; at which periods, reports of progress made in the several branches of literature and technical science, and of the public examinations, are made before the committee. These documents, accompanied by well digested remarks and seasonable suggestions, for the preservation of good order, &c and the improvement of the institution, are laid before the king by the commander in chief, as president and governor of the college.

The supreme board of the college is composed in the following manner:

The commander in chief for the time being, president.

Secretary at war.

Governor.

Master-general of the ordnance.

Governor of Chelsea college.

Quarter-master-general.

And two honorary members.

Barrack-master general.

Lieutenant colonel Le Marchant, as lieutenant governor.

General Jarry as commandant of the senior department.

These are the members of the supreme board, and such others may, from time to time, be named.

A secretary to the supreme board.

A president to the college.

The military SCHOOL *at Paris*, (*école royale militaire de Paris*, Fr.) This celebrated establishment, which for so many years supplied France with superior talents, and to which Bonaparte is indebted for the solid groundwork of that military knowlege that has astonished and conquered Europe, owes its origin to Henry IV. who first erected a public building in Anjou, for the free education of the children of poor noblemen; it was called the college of *La Flèche*, wherein one hundred young boys of the above description were supported, &c. at the king's expence. They were there taught Latin and the liberal arts by the Jesuits, whose learning, and aptitude at teaching others to learn, have been so deservedly admired in every quarter of the globe. This order, however, having been banished out of France in 1770, by Louis XV. because the members interfered with the government (whilst all their crimes consisted in being too virtuous to countenance the debaucheries of that weak monarch); the direction of the college was entrusted to the secular priests, and the number of students was increased to 350. On this occasion it was distinguished by a particular mark of royal favor, and was called the royal college.

In addition to this provincial establishment, Louis XV. instituted the royal military school in the neighborhood of Paris, where 250 young lads received a regular education under the most able masters; particularly in those branches which contributed to military knowlege. During their vacations, and at periods of intermission from classical pursuits, they were attended and instructed by experienced officers. They generally remained until the age of 18, and were after that distributed among the different regiments with appropriate commissions. They were then distinguished by being permitted to wear a cross, which was tied to a crimson piece of riband, and hung from a button-hole in their coat. The cross, on one side, represented the figure of the Virgin Mary; and on the other, there was a trophy adorned with three fleurs de lis. They had likewise an annual pension of 200 livres, (about 40 dollars) which was paid them without deduction, until they obtained the rank of captain, provided they had a certificate of good behaviour from the staff or état major of their corps. They received, moreover, when they quitted the school, a small kitt of linen, a hat, sword, and an uniform coat. They were replaced in the military school by an equal number of youths who came from the college of La Fléche, for that purpose, at the age of 13 or 14.

Both these establishments underwent a considerable alteration during the administration of the count de St. Germain, in April 1776. This minister persuaded Louis XVI. that great public benefit might be derived from increasing the number of these colleges, and admitting youths from every class of his subjects. When these alterations took place in the royal military school, all the young men that were 18 years old were incorporated with the regiments of gentlemen cadets. These enjoyed all the advantages which their predecessors had possessed; with this exception, that they did not wear the uniform of their corps, nor the cross. Those lads who had not reached the period in question, were placed in different corps, and several remained in the military school who were afterwards provided for on another footing. The number of young men was gradually increased, not only by fresh arrivals from La Fléche, but by the admission of several others for whom a yearly pension was paid by their parents. The latter, were not, however, entitled to any advantage or indulgence beyond what was generally allowed.

On the 28th of March 1776, the king gave directions, that ten colleges should be established, over the gates of each of which was written—*Collége Royale Militaire;* royal military college These colleges were under the immediate care and instruction of the Benedictine monks, and other religious persons.

The secretary of state held the same jurisdiction over these colleges that he possessed over La Fléche, and the military school at Paris.

There were always 50 at least, and never more than 60 young men placed for education in each of these colleges, at the expence of the king; amounting annually per head to 700 livres, about 150 dollars. For this sum each student was supplied with a blue coat with red cuffs, and white buttons, a blue surtout or great coat, two white waistcoats, two pairs of black breeches, twelve shirts, twelve handkerchiefs, six cravats, six night-caps, two dressing-gowns, two hats, two pairs of shoes, combs, and powder-bag. These articles were, in the first instance, to be provided by the young man's parents or friends, and when he quitted, he was furnished with the same articles at the expence of the college. Travelling expences, postage of letters, &c. were defrayed by the parents or friends of the different students. The secretary of state's letter, conveying the king's approbation, was the voucher for admission; but no child could be received unless he had previously learned to write and read. Candidates for admission, underwent a close examination on the very day they arrived, and if they were found deficient in any of the necessary qualifications, they were sent back to their friends with directions not to return until the year following, provided they got properly instructed during that period. No person could be admitted who was lame, or otherwise deformed; and certain proofs of nobility were to be established and given in, as well as proofs of property, vouched for by two gentlemen who lived in the neighborhood of the applicant, and confirmed by the intendant of the province, or by the governor. And in order to afford the parents ample time to collect the necessary vouchers, the preliminary consent of the king was forwarded to them six months before July, announcing that their children might be presented to the college on the 7th of September next following.

The king's students, or those young lads for whom 700 livres(150 dolls.)were annually paid out of his privy purse, were taught in the subordinate colleges, as in the military school at Paris, every thing that could be useful to a military character, besides music and other accomplishments. They were, moreover, regularly supplied with foils for fencing, and with mathematical and musical instruments. In order to excite emulation, prizes and rewards were distributed according to merit; and an allowance for pocket money was made in the following manner:—20 *sols*, or 10*d*. English per month, to each boy under twelve; and 40 *sols*, or 20*d*. to all above that age The royal pensions and allowances were paid every quarter, commencing on the 1st of April 1776. These payments were regulated by specific returns, which were regularly forwarded on the 15th of each month preceding the expiration of the quarter, to the secretary at war, and were signed by the heads or superiors of each college, accompanied by an exact muster-roll of all the students. By direction of the secretary at war, every species of necessary furniture and utensil that was found for La Fléche, and the military school at Paris, was distributed, in equal proportions, among the subordinate colleges; a preference, however, was uniformly given to the calls and necessities of those two establishments. The colleges that were appointed to pass the final examination of students received a double quantity of each article.

Every student who was admitted into any of the subordinate colleges at eight or nine years old, was obliged to remain there six years before he could appear at the final examinations; that period being thought necessary to complete his education. With respect to those who were entering into their tenth or eleventh year, and even those who were orphans, they were not forced to fill the term of six years instruction, provided they had already acquired sufficient knowlege to entitle them to a favorable report from their superiors.

The king directed that the pensions for 50 students upon the establishment, should be paid three months in advance to the several colleges, for the purpose of enabling them to complete the necessary buildings, &c. Each of those students was allowed a small separate apartment, with a key to the door. They were distributed in a particular quarter of the building, that they might be more easily attended to; having no other communication with the honorary pensioners, or those who had an allowance from their parents, than what was absolutely necessary to carry on the public instruction and discipline of the place.

The college of Brienne, a small town in Champagne, was fixed upon for the admission of the young lads whose pensions were paid by their parents. The latter likewise defrayed the expences of the journey; but they were entitled to the same indemnification that was afterwards granted to the king's students.—The same rules and method of instruction were pursued by the different colleges, in order that all the candidates might be brought together at the same time for examination. This examination was made in the presence of the principal, and under inspector of the schools, and of other literary men, who were appointed by the secretary of state for that purpose, and received 1200 livres, or 250 dollars, as a gratification for their attendance, besides board and lodging at the king's expence. The *concours*, or meeting for examination, took place every year, and lasted from the 1st to the 15th of September; the original one commencing in September 1778. The young men that passed the examination to the full satisfaction of these gentlemen, were placed in different regiments, and received commissions accordingly.

The four best informed and most able of the young candidates, received pensions or temporary allowances in the following manner:—The two first got 150 livres, between 6*l.* and 7*l.* sterling; and the two next 100 livres, equal to 4*l.* odd per annum, until they were promoted to companies. They were further entitled to wear the ancient cross of the military school. If any of them quitted the service before they had obtained the above rank of captain, the pension ceased.—They likewise received, (in common with all the other students that left the establishment) 200 livres, between 8*l.* and 9*l.* on their becoming lieutenants in the army.

The young men that were not found sufficiently instructed to join a regular corps, as gentlemen cadets, remained at the *Collége de Concours*, or college of examination, until the following year, when they were again questioned as to every particular which regarded a military education. But, let their success on this occasion be what it might, they ceased to be entitled to those marks of distinction and temporary allowances which were given to the first successful candidates. Those boys, who were brought by their parents, and for whom a pension was to be paid, lost all pretensions to the notice of government if they failed to give satisfaction at this final hearing. Proper representations of their incapacity were made by the inspector of military schools to the secretary of state, which representations were formally attested and corroborated by the opinion and judgment of the superior of the college of Brienne, in order that an accurate account might be given to his majesty, and that the parents might be officially directed to send or come for their children.

The superior or head of each subordinate college was directed, from the 1st of July 1778, to send, under cover to the secretary at war, an effective return of those students that had finished their course of education, and were prepared for examination. An order was then issued from the war-office for their attendance at the college of Brienne.

The heads of colleges were enjoined to transmit, annually, to the secretary of the war department, an analysis of the various elementary tracts which they had perused, accompanied by comments and observations thereon, together with original suggestions of their own. 6000 livres, or 1250 dollars, were allowed out of the annual revenue of the military school at Paris, for the specific purpose of rewarding those writers who should publish the best treatises relative to the military education of youth; and when this intent was fulfilled, the surplus or the sum entire was appropriated to the purchase of books, which were equally distributed among the different colleges, each of which had a separate library for the convenience and improvement of the students.

The king left it to the discretion of the different religious orders, to select such persons, as were best calculated to undertake the direction of the colleges, and to chuse the different masters and professors. He reserved, however, to himself the power of displacing any of them, if, upon mature and correct representation they were found inadequate to the trust.

The four professors, belonging to the colleges in which the four successful candidates at the general examination had been educated, received four golden medals, each worth 150 livres, 25 dollars, as a testimony of his majesty's approbation. The king's likeness was on one side of the medal, and on the other was engraved, *Prix de bon Instructeur;* the good teacher's prize. With the laudable view of collecting the best and most able masters, various rewards were imagined, and occasionally distributed among the different persons employed in the instruction of young beginners.

The different vacancies which occurred in consequence of the public examination that took place once a year, were regularly filled up at that period.

The secretary of state transmitted to

the heads of colleges a list, containing the names of the young men that were to succeed.

Louis XVI. exclusively of the 600 students who were placed in the different colleges pursuant to the new regulations, restored the ancient foundation of La Flèche, which had originally been established by Henry IV. for the benefit of 100 poor boys, who were of noble families, and whose parents had rendered some service to the state in the civil, military, or ecclesiastical line. They were educated according to the bent of their talents and disposition, and fitted to any of those professions; provisions and regulations having been made in the college of La Fléche for these purposes, which differed from the general system pursued in the other military colleges.

Those boys, who at 13 or 14 years old, discovered a partiality to civil or ecclesiastical functions, left the subordinate colleges, and repaired to La Fléche. Their number was limited to five, who might annually be admitted in consequence of an order for that purpose from the secretary at war; which order was obtained by their parents, on a representation being made to him of their talents and dispositions, confirmed and vouched for by the inspector general, and by the heads and superiors of each college.

An extraordinary allowance was made by the king to enable these students to acquire a knowlege of law, and to become acquainted with every species of theological learning.

These students were never permitted to leave college under a pretext of seeing their friends or parents, however near the residence of the latter might be.

The heads or superiors of each college transmitted every quarter to the secretary of state for the war department, and to the inspector general of schools, a minute account of the actual state of the college, and of the progress which each student had made in the several branches of education. If any extraordinary occurrence happened, these communications were to be made forthwith, and at broken periods, without waiting for the regular expiration of three months. They were likewise instructed to communicate with the parents of such children, as were paid for by them, giving an account of their progress in education, and stating what they had written on that subject to the secretary of state.

The inspector and under inspector-general went every year to the different colleges, to examine personally into every thing that concerned the management of each institution, and to report accordingly to his majesty.

The secretary of state for the war department was directed by the king to be present at the annual distribution of prizes, which were given in each college, in order to give every aid and consequence to these public marks of royal attention. In case of the secretary's death or sickness, the inspector-general of the schools attended for the same well judged purpose.

On the 26th of July 1783, an order appeared, by which the king directed, that the young gentlemen who, by a former regulation could only be admitted into the royal colleges between the ages of eight and eleven, should be received from the age of seven to that of ten. Orphans alone could be admitted as late as the full completion of twelve years. The parents of such children as had been approved of by his majesty, were, without delay, to send in proofs and certificates of their nobility; in failure whereof one year after their nomination, they were deprived of the situation which had been destined for them.

No family could solicit a letter of admission for more than one child at a time; and when it was granted, no application could be made in favor of another child until the first had completed his education, and was provided for in a regiment, or elsewhere.

The wisdom of this regulation is manifest. It was calculated to prevent every species of partiality and undue influence, and it kept the door open for many a meritorious youth, that might otherwise be deprived of the advantages of this useful institution. Like every other system, however, of that ill-fated monarchy, the principles were gradually perverted; and what was intended as a general good, became subservient to the intrigues of Versailles, the secret views of inspectors and commissaries, and the venal pliancy of individuals that acted under them. This evil was not confined to France. It has existed, and does still exist in other nations: the transactions in the case of the duke of York, in England, shews the profligate venality with which the sale of military offices was conducted. So strict was the regulation in France to prevent any monopoly of interest or patronage, that particular instructions were issued to commissaries to repair into the different provinces in which the several colleges stood, and to see that no students were sent to the general examination at Brienne, who had any brother or brothers under the same establishment.

On the 21st of January 1779, the following regulation appeared for the better management and advantage of the students belonging to the French royal military school:—

It was ordained, that the privilege of being received as members of the military orders of Notre Dame, of Mont-Carmel, and St. Lazarus, of Jerusalem, which had been hitherto given, without distinction, to all the students of the different colleges, should in future be considered as the reward of peculiar merit, and be rendered the means of exciting emulation among the gentlemen cadets of the royal military school only.

To this end the secretary of the war department was instructed to give in a list of six students who should have passed an examination before the inspector-general, with a minute account of their progress in the different arts and sciences, as well as of their general good conduct, natural disposition, &c. From this number three were selected by the grand master, and were made knights of the order, with permission to wear the cross according to prescribed rules and regulations. All the students that were so distinguished received from the revenue or funds of the order an annual allowance of 100 livres, equal to about twenty dollars; which sum was paid them exclusively of the 200 livres or forty dollars, which they got from the royal military school. They continued to receive the annual pension as long as they remained in the service; and if they were under the necessity of retiring through sickness, or wounds, it was continued to them during their natural lives.

Whenever a student who had been placed in a regiment, and was entitled to wear the cross of the royal military school, distinguished himself on service by some brilliant action, or gave an extraordinary proof of military knowlege, he was recommended to the grand-master, and on the attestation of the general commanding the army, countersigned by the secretary at war, he was instantly invested with the order of St. Lazarus.—Thus the re-union of these two crosses, (which could only happen in cases of singular merit, and under the circumstances already stated) would always bear undeniable testimony of the service rendered by the individual. The pension, in fact, would neither incur the suspicion of partiality, by having been a mere sinecure, nor the honorary mark, the imputation of undue influence, and ill-applied patronage.

In consequence of the king's approbation, the following specific regulation, relative to the orders of Mont-Carmel, and St. Lazarus, of Jerusalem, was issued on the 21st of January 1779, by Louis Stanislaus Xavier de Franks, brother to his majesty, and grand master of those orders, (the present head of the Bourbons, who uses the title of Louis XVIII.)

It was therein stated, that, in future, the order of Notre Dame du Mont-Carmel, should be reserved for such students belonging to the royal military school, as had been approved of in every respect, conformably to the prescribed instructions on that head, for the purpose of being admitted knights of the order. The mark by which they were distinguished consisted of a small cross similar to the one, already described, which was formerly worn by the students.—The candidates were obliged to prove four degrees of nobility on the father's side, and to produce the certificates required by the different colleges. Three out of the six received the cross, and became entitled from the day of their admission to an annual allowance of 100 livres, or twenty dollars, which they continued to enjoy as long as they remained in the service, and after they quitted it, provided they retired from the causes already stated. If a knight of the order of Notre Dame du St. Carmel, did any singular act of bravery, or discovered talents of superior military knowlege, on a proper attestation being produced of the same, signed by the general under whom he served, and countersigned by the minister of war, he became knight of the order of St. Lazarus, and by thus uniting the two orders, preserved an uncontestable proof of the service he had rendered.

This regulation, however, did not interfere with the antient forms and rules of the royal military school, as far as they concerned those students who had already been received into two orders. It only went to restrict the number of such as might lay claim to the particular marks of distinction, &c. which were thereby granted to the newly admitted.

In these schools, and in those of the artillery noted below, is to be found the true foundation of the military triumphs of France from 1792 to 1810.

The great military of school of France is now established at Fontainbleau by Bonaparte.

The French had likewise a marin school, (*école de marine*), which was kept at the expence of government, and was regularly attended to, in one of the departments. There was also a ship, distinguished by the name of school, (*école*) which was regularly manned and equipped for the instruction of young marines.

There were several schools of artillery, *écoles d'artillerie*, distributed in different parts of the kingdom, and supported at the public charge. The five principal ones were at *La Fère*, *Metz*, *Grenoble*, *Strasburgh*, and *Perpignan*.

They were under the direction of an inspector-general, who had the rank of a lieutenant-general in the army. Each school was superintended by three commandants, and was composed of ordinary and extraordinary commissaries belonging to the artillery, of officers who had the immediate direction of the levelling and pointing pieces of ordnance, and of volunteer cadets.

These schools were open throughout the year; advantage being taken of occasional fine weather during the winter months to practise and exercise. They were divided into schools of theory, *écoles de théorie*, and into schools of practice, *ecoles de pratique*.

The theoretical establishments were for the immediate instruction of all officers belonging to the engineer and the artillery departments.

The practical schools were open indiscriminately to all officers and soldiers. There was also a particular school for the information of those persons who directed their attention to mining and sapping; this school was called *L'école des Sappeurs*. The miner's school. There was likewise a school established at *La Fére*, to which none but artillery officers could be admitted. The students consisted of one company, whose number never exceeded 50. They had the rank of sub-lieutenants, and received a monthly subsistence, amounting to forty French livres, a little more than seven dollars.

The school at Méziéres, which was established before the additional one at La Fére, for the exclusive use and advantage of the artillery, was calculated to receive 30 officers; and those who went from La Fére had the rank of second lieutenants, with 60 livres, something more than ten dollars, as monthly subsistence.

It will naturally strike every observer, from these several establishments, which were all supported by government, and warmly patronised by the different reigning monarchs in France, that military science constituted one of the chief objects of French policy; and it is only bare justice to say, that their encouragement was not fruitlessly bestowed. All Europe has testified to the effect; the *neglect* of military science in other nations is equally striking, and ought to produce more wise precautions. The Turks have a military school, called the school for the Agemolans, or young men attached to the corps of Janizaries. This institution was created by Amurat, for the purpose of enuring a certain number of persons to every possible hardship of military service.

Fencing SCHOOL, (*école d'armes*, Fr.) Every French regiment, when in barracks or otherwise conveniently quartered, has a room allotted for the exercise of the small sword, the spadroon, &c. Some active clever serjeant or soldier is authorised to teach his comrades, and to derive what benefit he can from giving lessons abroad. We need scarcely add, that some internal regulation of the kind would be highly advantageous to officers every where.

SCIAGE, (*Bois de Sciage*, Fr.) Sawing. Wood that is proper to be sawed in planks, or to be made fit for any use in carpentry.

SCIAGRAPHY, (*Sciagraphe*, Fr.) The profile or section of a building to shew the inside thereof.

SCIE, *Fr.* a saw.

SCIENCE. Any art or species of knowlege; as military science, &c.

SCIENCE *de la guerre*, Fr. Military knowlege, or the science of war.

SCITIE, *or* SETIE, *Fr.* a smal decked barge with Levant sails.

SCORPION, (*Scorpion*, Fr.) a sort of long thick javelin or arrow, which was used among the ancients. For a specific description, see Vegetius and Justus Lipsius. The Cretans are supposed to have invented the scorpion.

SCIMITAR, a short crooked sword, more or less incurvated.

To SCOUR, (*Battre à toute volée*, Fr.) This term is frequently used to express the act of firing a quick and heavy discharge of ordnance or musquetry, for the purpose of dislodging an enemy.—Hence to scour the rampart or the covert way. It likewise signifies to clear, to drive away, viz. *To scour the seas*: Ecumer les mers, *Fr.*—*To scour the streets*; Ecumer les rues; also to run about in a loose desultory manner, as to scour the country.

To SCOUR *a line*, is to flank it, so as to see directly along it, that a musquet ball, entering at one end, may fly to the other, leaving no place of security.

SCOUTS, are generally horsemen sent out before, and on the wings of an army, at the distance of a mile or two, to discover the enemy, and give the general an account of what they see. See VIDETTES.

SCREW, (*Escrou*, Fr.) One of the mechanical powers, which is defined a right cylinder cut into a furrowed spiral. Wilkins calls it a kind of wedge, that is multiplied or continued by a helical revolution about a cylinder, receiving its motion not from any stroke, but from a vectis at one end of it.

SCREWS, in *gunnery*, are fastened to the cascable of light guns and howitzers, by means of an iron bolt, which goes through a socket fixed upon the centre transom, to elevate or depress the piece with, instead of wedges.

SCREW *of direction*, (*Vis de Pointage*, Fr.) The screw of direction, used in the artillery, is formed of a brass horizontal roller, placed between the two cheeks of the carriage. The trunnions of the roller move upon two vertical iron pivots, which are fixed against the interior sides of the cheeks. By means of this screw the direction of pieces is either raised or lowered with a regular movement, and in the smallest space.

The screw of direction, or *Vis de Pointage*, is equally used for howitzers as well as for heavy pieces of ordnance. It has been invented by the French, and serves in lieu of the *Coins à Cremaillère*, or indented coins. So little progress has military science made in the United States, that there are many old officers in the U. States' service who know nothing even of this little but important particular.

Lock SCREWS. Small screws which are attached to the lock of a musquet.

SCULLCAP. See HELMET.

SCURVY, (*Scorbut*, Fr.) A disease to which soldiers and seamen are peculiarly exposed, from idleness, inattention to cleanliness of person and food, eating salted meat and drinking bad water, &c.

SCUTE *or Canot*, Fr. In Dutch *Schoot*, and Canot, is pronounced with us as if written *cannoo*. Any small boat which is used in navigation for the accommodation of a ship.

SEARCHER, an instrument used by the founders to discover any flaws in the bore of cannon, &c. See Proof.

To SEASON. In a military sense, to accustom, to enure. Soldiers are frequently sent to Gibraltar in order to be seasoned for a hot climate.

Seasoned *Troops*. Troops that have been accustomed to climate, and are not so liable to become the victims of any endemical disorder, as raw men must unavoidably be. The French use the word *acclimater;* to get accustomed to a change of climate. Hence *Troupes acclimatees;* troops that have been seasoned.

SEAT *of war*. The country in which war is carrying on.

SECANT, (*Secante*, Fr.) A line which cuts another, or divides it into two parts. See table at the end of the word Gunnery.

Secant *of an arch*. In trigonometry, is a right line drawn from the centre of the circle to the extremity of the tangent.

Secant *of an angle*. Supposing an angle to be terminated by a base that is perpendicular to one of the sides, and that the smallest side of the angle be taken for the radius or whole sinus, the greatest of the two sides of that angle will be its secant.

SECOND, (*Second*, Fr.) The next in order to the first. The ordinal of two. The next in dignity, place, or station. The French use the word *Second* in military matters, somewhat differently from the English, viz.

Compagnie en Second, *Fr*. This literally means second company, but according to the old French regulations it signifies a company which consists of half the number of men that other companies are composed of. This was however, applied to the cavalry only.

Capitaine en Second *ou reformé en pied*, or *Lieutenant en* Second, *ditto*, Fr. are officers whose companies have been reduced, but who do duty in others, and are destined to fill up the first vacancies. We have borrowed the expression and say, *to be seconded*. When an officer is *seconded*, he remains upon full pay, in the British service, his rank goes on, and he may purchase the next vacant step, without being obliged to memorial in the manner that a half-pay officer must. Should the latter have taken a difference, he will find much difficulty in getting upon full pay, and he can only avail himself of his standing in the army when the last object is accomplished. So that a *seconded* offi- stands in a more favorable light. He sides likely to be appointed to the vacant commission of the regiment in which he is seconded.

Prendre pour son Second, *Fr*. To take for a second.

Les seconds *de côté et d'autre se son tués*, Fr. Both the seconds were killed; or the seconds on each side killed one another. It was very usual among the French for the seconds to make common cause with their principals, and to fight upon the decease of the former. The practice is reprobated and out of date.

To second, (*seconder*, Fr.) To aid or assist, to support.

Second *covert way*, that beyond the second ditch. See Fortification.

Second *ditch*, that made on the outside of the glacis, when the ground is low, and there is plenty of water. See Fortification.

Second *Flanc*, Fr. See *Flank oblique in* Fortification.

SECOURIR *une place*, Fr. To throw succours into a besieged town or place. It sometimes signifies to force an investing or attacking army to raise the siege.

SECRECY. In a military economy this quality is peculiarly requisite. It signifies fidelity to a secret; taciturnity inviolate; close silence. Officers, in particular, should be well aware of the importance of it, as the divulging of what has been confidentially entrusted to them, especially on expeditions, might render the whole project abortive. The slightest deviation from it is very justly considered as a breach of honor, as scandalous conduct, unbecoming an officer and a gentleman. In official matters the person so offending is liable to the severest punishment and penalty.

SECRET, (*Secret*, Fr.) Under this word may be considered the caution and circumspection which every good general should observe during a campaign; the feints he may think proper to make for the purpose of covering a projected attack; and the various stratagems to which he may resort to keep his own intentions concealed, and to get at those of others.

Secret. Kept hidden, not revealed. Hence secret expedition, secret enterprise, &c Secret articles of a treaty, being the correlative words to public articles.

Secret, *Fr*. The spot chosen by the captain of a fire-ship to apply the saucisson of communication.

Secret *expedition*. Those are often called such, which in fact are known to the enemy before they are put in execution; they should never be communicated to any other than the commander of the troops, and the first naval officer, until they are in absolute readiness to act, and but a few hours before the enterprize is put in execution: no officer being allowed to open his instructions until he is either at his destination, or at sea. See Expedition.

SECRETAIRE, *Fr.* The clerk belonging to the Swiss regiments in the old French service, was so called. He acted likewise as quarter master serjeant, and was styled *Musterschriéber*.

Secretaire *général d'artillerie*, Fr A place of trust, which, during the French monarchy, was in the nomination of the grand master.

SECRETARY *at war*, (*Secrétaire de guerre*, Fr.) The first officer of the war department.

Secretary *of state*. (*Secrétaire d'etat*, Fr.) The secretary who has charge of the foreign relations.

To Secrete, to hide; to keep private; to harbor; to conceal, &c. By the articles of war it is provided, that if any person shall harbor, conceal, or assist any deserter from his majesty's service, knowing him to be such, the person so offending shall forfeit, for every such offence, the sum of five pounds.

SECTION. (*Section*, Fr.) from the Latin word *sectio*, which is derived from *seco*, to cut, a part of a thing divided, or the division itself. Such particularly are the subdivisions of a chapter, called also paragraphs and articles. Sometimes we find the term section divided into articles; as in the articles of war.

SECTION. *Section*, Fr. A certain proportion of a battalion or company, when it is told off for military movements and evolutions. A section may consist of four or any other number of files.—This relates to the infantry; the cavalry into ranks by three's, and after that in any number of files or sections. The French use the word section for the same purpose; and form their companies into platoons, and divide their platoons into any number of sections.

SECTOR, (*Secteur*, Fr.) A mathematical instrument of great use in finding the proportion between quantities of the same kind, as between lines and lines, surfaces and surfaces, &c. for which reason the French call it the compass of proportion.

The great advantage of the sector, above common scales, &c. is, that it is adapted to all radii, and all scales. The sector is founded on the fourth proposition of the sixth book of Euclid. The sector consists of two equal legs, or rules of brass, &c. riveted together, but so as to move easily on the rivet; on the faces of the instrument are placed several lines; the principal of which are; the line of equal parts, line of chords, line of sines, line of tangents, line of secants, and line of polygons.

To SECURE, in a military sense, to preserve, to keep, to make certain. As to secure a place, to secure a conquest. In the management of the firelock, it signifies to bring it to a certain position, by which the locks are secured against rain. Hence

SECURE *arms!* a word of command which is given to troops who are under arms in wet weather. To bring your firelock to the secure; 1st, throw your right hand briskly up, and place it under the cock, keeping the piece steady in the same position.

2d Quit the butt with the left hand, and seize the firelock with it at the swell, bringing the elbow close down upon the lock: the right hand kept fast in this motion, and the piece still upright.

3d. Quit the right hand, and bring it down to your right side, throwing the firelock nimbly down to the secure; the left hand in a line with the waist-belt. In order to *shoulder* from the secure, you must 1st, bring the firelock up to a perpendicular line, seizing it with the right hand under the cock.

2d. Quit the left hand, and place it strong upon the butt.

3d. Quit the right hand, and bring it smartly down the right side.

SEDITION, in a military sense is to disobey orders; to cabal or form factions against the officer or officers in command; to loosen confidence; to resist or oppose orders, or to stir up mutiny. It is an offence in military law of the most fatal character and always punished in a most exemplary manner. See Mutiny.

SEER, *Ind.* A weight nearly equal to a pound.

SEESAR, *Ind.* the dewey season.

SEEARISH, *Ind.* A recommendation.

SEEPEEYA, *Ind.* A triangle to which culprits are tied to be punished.

SEFFY, *Ind.* A dynasty of Persia.

SEGBANS. Horsemen among the Turks, who have care of the baggage belonging to cavalry regiments.

SEGMENT, a figure contained between a chord and an arch of the circle, or so much of the circle as is cut off by that chord.

SEJA, *Ind.* A fenced terrace.

SEILLURE, (*Sillage*, *eau*, *bouage ou ouiache*, Fr) terms used among the French to express the way a ship makes: it corresponds with our naval word *Wake*, which is also called *Eaux*.

SEJOUR, *Fr.* In a military sense signifies a halting day. In a naval one, the time that a ship remains in port.

SCION, *Fr.* A sand-crack in a horse's hoof.

SEIN, *Fr.* In the midst. The French say figuratively, *porter la guerre dans le sein d'un royaume*. To carry a war into the heart of a kingdom. *Au sein de ses soldats*. In the midst of his soldiers.

SEL, *Fr.* Salt. Before the revolution of 1789, the French troops were allowed a specific quantity of salt, which was regularly accounted for at the back of the muster-rolls.

Sel, *Fr.* The salt used in the artillery is lixivial, and of a fixed quality It is extracted from saltpetre, and must be thoroughly washed, as no saltpetre can be good which has the least saline or greasy particle about it.

SELICTAR. A Turkish sabre.

To SELL, to give for a price; the word correlative to *buy*. Hence to buy and sell commissions.

SELLE, *Fr.* A saddle. See Boute-selle.

Selle *rase*, Fr. A saddle without a bow

Selle *à arçon*, Fr. A bow-saddle.

SEMBLABLES, *Fr.* In geometry, similar, alike, equal. This term is applied to any two figures, the sides of one of which correspond with the sides of the other, and are always in the same ratio. So that semblable or alike, only means in this sense *equal*. Two circles, though unequal in their sizes, may still be alike; that is, their several parts may agree according to a certain ratio.

Les SEMELLES, *Fr.* The axletrees belonging to the carriage of a gun.

SEMESTRE, *Fr.* This word literally signifies a term of six months; but it is generally understood to express any term of leave of absence which is granted to officers or soldiers. With respect to the latter, it means furlough.

SEMICIRCLE, part of a circle divided by the diameter.

SEMIDIAMETER, half of the line which divides a circle into two equal parts.

SEMIORDINATE, a line drawn at right angles to be bisected by the axis, and extending from one side of the section to the other.

SENAU, *Fr.* A small skiff or tender calculated for quick sailing.

SENECHALE, *Fr.* The seneschal's wife or lady.

SENESCHAL, (*Senéchal, Fr.*) One who had in great houses the care of feasts, or domestic ceremonies.

SENS-*dessus-dessous*, Fr. Topsy-turvy.

Sens-*devant-derrière*, Fr. Wrong way.

SENIORITY, in military matters, is the difference of number in two regiments, whereby the one is said to be so much senior to the other. All regiments take place according to seniority.

SENTENCE. Decision; determination, final judgment. There is an appeal allowed from the sentence of a regimental court-martial to the opinion of a general one.

SENTINEL, } is a private soldier,
SENTRY, } placed in some post, to watch the approach of the enemy, to prevent surprises, to stop such as would pass without order, or discovering who they are. Sentries are placed before the arms of all guards, at the tents and doors of general officers, colonels of regiments, &c.

All sentries are to be vigilant on their posts; they are not, on any account to sing, smoke tobacco, nor suffer any noise to be made near them. They are to have a watchful eye over the things committed to their charge. They are not to suffer any light to remain, or any fire to be made near their posts in the night-time; neither is any sentry to be relieved, or removed from his post, but by the corporal of the guard. They are not to suffer any one to touch or handle their arms, or in the night-time to come within 10 yards of their post.

No person is to strike or abuse a sentry on his post; but when he has committed a crime, he is to be relieved, and then punished according to the rules and articles of war.

A sentinel, on his post in the night, is not to know any body, but by the countersign: when he challenges, and is answered, *relief*, he calls out *stand, relief! advance, corporal!* upon which the corporal halts his men, and advances alone within a yard of the sentry's fire-lock (first ordering his party to port arms, on which the sentry does the same) and gives him the same countersign, taking care that no one hears it. See Rounds.

SENTINELLE, *Fr.* Sentinel; sentry. This word is likewise used to express the duty done by a sentinel. *Faire sentinelle.* To stand sentry.

Sentinelle *perdue*, Fr. A sentry posted in a very advanced situation, so as to be in continual danger of surprise from the enemy.

SEPTANGULAR, having seven angles.

SEPTILATERAL, having seven sides.

SEPTUPLE. Seven-fold.

SERASKIER, (*Serasquier*, Fr.) Among the Turks, the next in rank to the Vizier, in whose absence he commands, but to whose orders he is constantly subservient.

SERGENT *d'armes*, Fr. During the old monarchy of France, particularly in the reign of Philip Augustus, a guard was composed of firm trusty men for the safety of the king. This guard was called *Sergens d'armes*, from the Latin words *servientes armorum*. The company of the *Sergens d'armes* was composed of one hundred and fifty, or two hundred men. The number was reduced by Philip de Valois to one hundred. Charles V. during the regency broke the company, keeping only six men of that description round his person; and Charles VI. had only eight, half of whom did duty alternately every month. With us the serjeant at arms is a person appointed to attend a public body, arrest traitors, and persons offending.

SEPADAR, *Ind.* An officer of the rank of brigadier-general.

SEPAHI, *Ind.* A feudatory chief, or military tenant; a soldier. See Sepoys.

SEPHARRY, *Ind.* Afternoon.

SEPOYS, *Ind* derived from the Persian *Spahi*. Natives who have inlisted themselves into the service of the East India Company, and are attached to the infantry. These troops have both native and European commissioned and non-commissioned officers; but the Europeans at all times command. The Sepahis make excellent soldiers, are remarkably clean, and feel a natural predilection for arms. See Spahi[illegible]

SERAKHUR, *Ind.* } Native non-
SERANG, } commissioned officers who are employed in the artillery, and on board ships of war. In the artillery the title answers to that of *serjeant;* in the naval service to that of *boatswain.*

SERASKUR, *Ind.* This word is sometimes written Seraskier, and signifies the commander in chief of a Turkish army.

SERDANS Colonels in the Turkish service are so called.

SERGENT, *Fr.* See Sergeant or Serjeant.

Sergent *noble, Fr.* A post of honor which existed during the first periods of the French monarchy. The French compiler, from whose work we have occasionally translated much matter relative to the military history, &c. of France, has the following passage concerning the term itself We shall give his meaning literally:—"This term does not come from *serviens*, as I have imagined in common with many other etymologists Monsieur Beneton, in his *Histoire de la Guerre*, says, that the serjeant who seemed to think he could trace the origin of his title in the Latin word *Serviens*, was a gentleman by birth, who during the prevalence of military fiefs, was liable to do military service, in consequence of the feodal tenure, called *Fief de Sergenterie*, by which he held his land. His superior officer was called *Suzerain*, the functions of whose situation corresponded with those of a modern adjutant. It was the business of the *Sergent Noble*, or gentleman serjeant, to assemble all the vassals of the Suzerain, for the purpose of incorporating them under one standard, and of rendering them fit for war.

Sergent *de bande*, Fr. Serjeant in the common acceptation of the term.—The etymology of this word is different from that of Sergent Noble. It evidently comes from the French *Serregens*, or men that close or lock up, the same as serre-files; shewing that this non-commissioned officer was placed to take charge of the rear files, whilst the commissioned one was in the front. It was his business to see that the rear conformed itself to the orders which were given in the front; to make the files lock up and dress, &c.

Sergent *de bataille*, Fr. Field serjeant. This was an appointment of considerable trust in the old French armies. The *sergens de bataille* held commands, and did the duty of modern inspectors. They ranked next to a field marshal, or *marechal de bataille*. The *sergens de bataille*, or field serjeants, existed under Francis the First. But these field serjeants were only at that time *sergens de bandes*, or train serjeants. There were likewise, under the same king, *sergens generaux de bataille*, general field serjeants. These were officers of rank, and did the duty of a modern major general.

There were also officers of the same description in the reign of Henry IV. This appointment appears to have been dropped after the peace of the *Pyrenees*. The author of the *Histoire de la Milice Francaise*, observes, that the appointment and duty of the different officers, called marshals, or field serjeants, varied according to the will and pleasure of the French kings, and their war-ministers. He agrees with us, that the situation of field serjeant was originally of great consequence, but that it gradually declined, and was eventually made subservient to a superior officer, who was called *Marechal de bataille*, or field-marshal, whose duties corresponded with those of the French adjutant-general in the present times.

There have been officers of the same denomination both in Spain and Germany, who did the duty of Maréchaux de Camp; another term, we presume, for field marshal. But the general field serjeants in those countries were divided into two classes; one class was confined, in its functions, to the infantry, and the other to the cavalry; and both acted independently of one another; whereas in France they acted together.

According to the present establishment of the French army, there is a serjeant major belonging to each company. The *sergens majors d'un régiment*, or *d'une place* of the old French service, were what are now simply called *majors*, majors of regiments, or town majors. The senior serjeant of every company is called *serjeant major* in the French army at this time. In the British army the *serjeant major* is the head of the non-commissioned officers, and though sometimes attached to a company, is generally a detached staff officer See Serjeant Major.

SERGENTER, *Fr.* A word frequently used by the French in a figurative sense, signifying to press, to importune. *On n'aime pointe à être sergenté;* one does not like to be pressed; or as we familiarly say, to be dragooned into a thing.

SERHUD, *Ind.* A boundary, or frontier.

SERGEANT, } in *war*, is a non-
SERJEANT, } commissioned or
SERGENT, *Fr.* } inferior officer in a company or troop, and appointed to see discipline observed; to teach the private men their exercise; and to order, and form ranks, files, &c. He receives the orders from the serjeant-major, which he communicates to his officers. Each company has generally four serjeants.

SERJEANT-*Major.* The serjeant-major is the first non-commissioned officer in the regiment after the quarter-master in the English army. He is, in fact, an assistant to the adjutant.

It is his peculiar duty to be perfect master of every thing which relates to drills; and it is always expected, that he should set an example to the rest of the non-commissioned officers, by his manly, soldier-like, and zealous activity.

He must be thoroughly acquainted with all the details which regard the interior management and the discipline of a regiment. For this purpose he must be a good penman, and must keep regular returns of the serjeants and corporals, with the dates of their appointments, as well as the roster for their duties, and rosters of privates orderly duty and commands, as far as relates to the number which each troop or company is to furnish. He is in every respect responsible for the accuracy of these details. He must look well to the appearance of the men, and order such to drill as he sees awkward, slovenly, or in any way irregular. If it be meant as a punishment, he specifies the time for which they are sent to drill: if only for awkwardness, they remain there until their faults are removed.

When he has occasion to put a non-commissioned officer in arrest, he must report him to the adjutant.

It is the duty of the serjeant-major, under the direction of the adjutant, to drill every young officer who comes into the regiment in the manual and marching exercises: he is likewise to instruct him in the slow and quick marches, in wheeling, &c.

He reports regularly to the adjutant the exact state of the awkward drill, &c.

It is scarcely necessary to observe in this place, that the good or bad appearance of a regiment, with or without arms, depends greatly upon the skill and activity of the serjeant major; and that he has every inducement to look forward to promotion.

Quarter-master Serjeant. A non-commissioned officer who acts under the quarter-master of a regiment; he ought to be a steady man, a good accountant, and to be well acquainted with the resources of a country town or village.

Pay-Serjeant. An honest, steady, non-commissioned officer, (who is a good accountant, and writes well) that is selected by the captain of a company in the infantry, to pay the men, give out rations, and to account weekly to him, or to his subaltern, (as the case may be) for all disbursements. He likewise keeps a regular state of the necessaries of the men, and assists in making up the monthly abstract for pay, allowances, &c.

Covering Serjeant. A non-commissioned officer who during the exercise of a battalion, regularly stands or moves behind each officer, commanding or acting with a platoon or company. When the ranks take open order, and the officers move in front, the covering serjeants replace their leaders; and when the ranks are closed, they fall back in their rear.

Drill Serjeant. An expert and active non-commissioned officer, who, under the immediate direction of the serjeant major, instructs the raw recruits of a regiment in the first principles of military exercise.. When awkward or ill-behaved men are sent to drill, they are usually placed under the care of the drill serjeant. This non-commissioned officer will do well to bear constantly in mind the following observations from page 135, Vol I. of the *Règlemens pout l'Infanterie Prusienne*.

"In teaching young recruits their first duties, the greatest caution must be observed not to give them a disgust to the service, by harsh treatment, angry and impatient words, and much less by blows. The utmost mildness must, on the contrary, be shewn, in order to endear the service to them; and the several parts of exercise must be taught them by degrees; so that they become insensibly acquainted with the whole of the discipline, without having been disgusted in the acquirement. Rustics and strangers must be used with extreme lenity."

The principle of kind conduct is not less worthy of the officers of a free nation like the United States; a generous but firm conduct is always better calculated to assure good discipline, than violence or brutality. Men learn sooner, learn better, and like what they learn when treated as *men*, not as brutes. There yet prevails too much of the barbarity of the British and German systems in the American army.

Lance Serjeant. A corporal who acts as serjeant in a company, but only receives the pay of corporal.

White Serjeant. A term of just ridicule, which is applied to those ladies who, taking advantage of the uxoriousness of their husbands, and neglect their household concerns, to interfere in military matters.

SERMENT, *Fr.* Oath.

Prêter Serment, *Fr.* To take an oath.

SERPE, *Fr.* A bill hook.

Serpe *d'armes*, Fr. An offensive weapon; so called from its resemblance to a hedging bill.

SERPENTEAU, *Fr.* A round iron circle, with small spikes, and squibs attached to them. It is frequently used in the attack and defence of a breach. It likewise means a fusee, which is filled with gunpowder, and is bent in such a manner, that when it takes fire, it obtains a circular rapid motion, and throws out sparks of light in various directions.

Serpenteaux *et serpenteaux brochetes*, Fr. A species of lardon or fusee, which is garnished or loaded upon a stick or spit that is a third of the length of the cartridge.

battalion, by which its depth is ascertained, and which always forms its rear. When ranks are doubled, the battalion resumes its natural formation by means of the serre-files. Serre-file literally signifies a bringer up.

SERRE *demi File*, Fr. That rank in a battalion which determines the half of its depth, and which marches before the demi-file. Thus a battalion standing six deep, has its *serre-demi file* in the third rank, which determines its depth.

Capitaines de SERRE-*Files*, Fr. The officer who commands a rear guard when a regiment is on its march.

SERRER, *Fr.* To close up. *Serrez vos rangs.* Take close order.

SERRER *la bride*, Fr. To pull in the bridle.

SERRURE, *Fr.* A lock.

SERRURIER, *Fr.* A locksmith.

SERVANS *d'armes*, or *Chevaliers Servans*, Fr. Persons belonging to the third class of the order of Malta are so called. They are not noblemen, although they wear the sword and the cross

To SERVE, (*Servir*, Fr.) In a military sense, to do duty as an officer or soldier.

To SERVE *a piece.* In the artillery, to load and fire with promptitude and correctness. The French use the term in the same sense, viz. *L'artillerie fut bien servie à ce siege.* The artillery was well served at this siege.

SERVICE, (*Service*, Fr.) In a general sense of the word, as far as it relates to war, every species of military duty which is done by an inferior under the influence and command of a superior. It likewise means exploit, atchievement. It also points out the particular profession to which a man belongs, as land service, sea service, and the degree of knowlege which he may have acquired by practice, viz. He has seen a great deal of service.

SERVICE likewise means the period during which a man has done duty, or followed the military profession in an active manner.

To see SERVICE. To be in actual contact with an enemy.

To be on SERVICE. To be doing actual duty with a corps or detachment.

To enter into the SERVICE. To receive a commission in the army. The individual must be recommended to the commander in chief, or to the secretary at war, (as the case may be) stating him to be fully qualified to hold that situation.

To retire from the SERVICE. To quit the army, or resign.

No officer can resign his commission, or retire from the service, without having previously obtained permission through the commander in chief, or the secretary at war, as the case may be.

To retire from the SERVICE, *keeping one's rank.* It has sometimes happened, that the service, and to take advantage of his original standing. A very meritorious officer, of high rank at present, was permitted to retire in this manner. There have been instances of officers retiring not only with their rank, but with a certain allowance from the regiment.

Infantry SERVICE. Service done by foot soldiers.

Cavalry SERVICE. Service done by soldiers on horseback.

Faire son SERVICE, *Fr.* To do one's duty.

Etre de SERVICE, *Fr.* To be on duty.

Etre de SERVICE, *chez le roi.* To do duty at the palace.

Service likewise means tour of duty, or routine of service.

SERVICE *de l'infanterie en marche*, Fr. The regular duties, or routine of service which an infantry regiment goes through when it receives orders to march. These are, the general, *la générale* ou le *premier.* The assembly, *l'assemblée.* The troop, *le drapeau* ou le *dernier.*

SERVICE *des places*, Fr The regular duty, or routine of service, which is performed in fortified towns or places. Of this description are garrison duties. See *l'Essai sur la science de la guerre* par Mons. le baron D'Espagnac, tom. iii. p. 355, and *les Elémens Militaires*, tom. ii. p. 116, where specific regulations on this head may be seen. We likewise recommend to the perusal of every engineer and artillery officer, a late valuable publication, entitled Essai Générale de Fortification et d'Attaque et Defence des places.

SERVICE *de campagne*, Fr. Field duties: This subject has been ably treated by several French writers, and among others by the author of *les Elemens Militaires*, tom. ii. p. 1, &c. and in tom. iv. p. 68, &c.

A letter of SERVICE. See LETTER.

Home SERVICE. In a military sense, the duty which is done within the limits of the United States. This term is frequently used to distinguish such troop
as are not liable to serve beyond specifie
limits, from those that have been rais
for general service; as the militia in
several states of the union.

Foreign SERVICE. Military dut
service done abroad.

Secret SERVICE Any service p
ed by an individual, in a clandesti
manner. It likewise means int
or information given by spies w
tries are engaged in war, for
receive pecuniary compensati

Secret SERVICE *money.*
or compensation which is g
intelligence.

SERVICEABLE, cap
ing all necessary militar

Services. Pecuniary disbursements, or payments which are made for military purposes.

Servir *le canon*, Fr. To serve the cannon

Servir *l'artillerie*, Fr. To serve the artillery.

To **SET** *a sentry* Poser une sentinelle. To place a soldier at any particular spot for its security.

To **Set** *on*, (*Attaquer*, Fr) To attack.

To **Set** *at defiance*, (*defier*, Fr.) To defy; to dare to combat, &c.

To **Set** *up*. To make a man fit for military movements and parade, according to the old and ridiculous method of military instruction; by which a man was placed in *stiff* and *awkward* attitudes, with the notion of making him supple and active! But that excess of setting up which stiffens the person, and tends to throw the body backward instead of forward, is contrary to every true principle of movement, and must, therefore, be most carefully avoided. By the new principles nature is consulted, and instead of teaching one man awkward positions, fifty or an hundred are taught at once to move in an easy and natural manner.

SETENDY, *Ind.* The militia.

SETTER, in *gunnery*, a round stick to drive fuzes, or any other compositions, into cases made of paper.

SHAFT-*rings*. See **Rings**.

SEUIL, *Fr.* A threshold.

Seuil *d'ecluse*, Fr. A thick piece of wood which is laid cross-ways between two stakes at the bottom of the water, for the purpose of supporting the flood-gate.

Seuil *de pont levis*. A thick piece of wood with a groove, which is fixed on the edge of the counterscarp of a fosse or ditch, in order to bear the weight or pressure of the draw-bridge, when it is lowered. It is likewise called *sommier*, a *summer* or principal beam.

SEWER. In military architecture, a drain, conduit, or conveyance, for carrying off water, foliage, &c It is necessary that every building have conveniencies for discharging its refuse water, and other useless and offensive matters.—These are obtained by digging and laying sewers and drains at proper depths, and with the necessary outlets: the great care is, that they be large enough; that they be placed sufficiently deep, and have a proper descent; that they be well arched over, and have so free a passage, that there be no danger of their choaking up; the cleaning them being a work of trouble and expence.

Instead of making the bottom of the sewer a flat floor, it should be in the form of an inverted arch, answering in part to the sweep of the arch above. Every one knows that the freest passage is through circular channels; and these might easily constructed so as to wear that form; would resemble so many water-pipes of a circular base, and there would be no danger of their filling up. The perpendicular walls would not retain any thing, because there are no angles in their joining; and the bottom being round and free, all would run off. These circular sewers are with us called *culverts*.

SEX-*angled*, having six angles.

SEXTANT, (*Sextant*, Fr.) In mathematics, an instrument which serves to measure angles. It is the segment of a circle, or an arch of 60 degrees, which makes the sixth part of a circle.

SEYMAR-*Bassy, or first lieutenant general of the Janizaries.* An officer among the Turks who not only commands the Janizaries that are called *Seymenis*, but when the Aga, (which signifies chief guardian, and Aga-si, chief or guardian of) takes the field, who further takes the title of Kaymekan, or his lieutenant at Constantinople. He is authorised to put his own seal upon the different dispatches which he sends, and takes rank of all the sardars or colonels in his jurisdiction.—He is likewise entrusted with the entire direction and management of all that concerns or relates to the interior government of the Janizaries.

SHAKEE, *Ind.* A small coin, of the value of about three-pence.

SHAKER, *Ind.* A city.

SHAIT, *Ind.* Bridge, embankment.

SHAFT, an arrow; a missive weapon.

Shaft, in mining; a narrow, deep perpendicular pit.

Shafts *of a carriage*, are two poles joined together with cross bars, by which the hind horse guides the carriage, and supports the fore part of the shafts; the hind part turning round an iron bolt.

Shaft-*bars*, are two pieces of wood to fasten the hind ends of the shafts together, into which they are pinned with wooden pins.

SHALLIE, *Ind.* The same as batty, which signifies rice in the husk.

SHAMROCK. The Irish word for trefoil, clover, or three leafed grass. It is worn by the Irish in their hats on the 17th of March, St. Patrick's day.

SHANK. The long part of any instrument.

SHAROCK, *Ind.* A silver coin, equal in value to about one shilling.

SHAUMIARIS, *Ind.* A canopy of cotton cloth.

SHAW, *Ind.* A king.

SHAWZADA, *Ind.* The king's son.

SHEED, *Ind* A witness.

SHEICK. A chief of a tribe among the Arabs. Mr. Morier, in his account of a campaign with the Ottoman army, relates that in 1800, a fanatic sheick, who pretended to be inspired, headed the Fellahs, (the lowest class of inhabitants are so called among the Arabs) of the district of Demanhour, and caused a detachment of 80 Frenchmen to be put to death in the night; this was effected by first securing the sentinel.

SHELLS, in *gunnery*, are hollow iron balls to throw out of mortars or howitzers with a fuze hole of about an inch diameter, to load them with powder, and to receive the fuze: the bottom, or part opposite the fuze, is made heavier than the rest, that the fuze may fall uppermost; but in small elevations this is not always the case, nor is it necessary; for, let it fall as it will, the fuze sets fire to the powder within, which bursts the shell, and causes great devastation. The shells had much better be made of an equal thickness, for then they burst into more pieces

The following shells may also be fired from guns.

Hand grenades from 6 Prs.
4 2-5 shells —— 12 Prs.
5 1-2 shells —— 24 Prs.
8 inch —— 68 Pr. carronades.

Shells may likewise be thrown from guns to short distances, in case of necessity, though the bore be not of a diameter sufficient to admit the shell. For this purpose the gun may be elevated to any degree that will retain the shell upon its muzzle, which may be assisted by a small line going from the ears of the shell round the neck of the gun. To produce a greater effect, the space between the shell and the charge may be filled with wads or other substance.

Shells for Mortars and Howitzers—Their Dimensions, Weight, &c.

Kind.	Weight.				Diameter.	Powder contained in Shells.		Powder for bursting.		Diameter of Fuze Hole.		Thickness of Metal.
	Ct.	qr.	lbs.	oz.	Inches.	lbs.	oz	lbs.	oz	Outside. Inches.	Inside. Inches	Inches.
13 inch.	1	3	2		12¾	10	4	6	12	1·837	1·696	2·05
10 ——		3	9		9¾	4	5	2	10	1·57	1·45	1·575
8 ——		1	11½		7¾	2	12	1	14	1·219	1·127	1·2
5⅗ ——			15¼		5½	1			12	0·894	·826	0·822
4 2-5 ——			8		4 1-5		7		5	0·832	·769	0·653
H. Gren.			3	11	3.49							
			1	13	2.77				1			

To find the weight of a shell of iron.

Take 9 64 of the difference of the cubes of the external and internal diameters for the weight of the shell.

To find how much powder will fill a shell.

Divide the cube of the internal diameter of the shell in inches by 57·3, for the pounds of powder.

To find the size of a shell to contain a given weight of powder.

Multiply the pounds of powder by 3.75, and the cube root of the product will be the diameter in inches.

To find the weight of a SHELL. *Rule.* Double the difference of diameters of the shell and hollow sphere, and 7 times the result gives the weight in pounds, cutting off the two right hand figures of whole numbers.

Example. Let the diameter of the shell be 13 inches, and that of the hollow sphere 9.5. Then the cube of 13 is 2197, and that of 9.5, is 857 357; the difference is 1339.625, its double is 2679.25, which multiplied by 7, gives 18754.625; and cutting off two places in whole numbers, the result is 187 lb. or 1 cwt. 2 qrs. 21 lb. the weight of the shell.

French Shells, in French weights and measures.

Kind.	Weight.	Diameter.	Powder contained in Shells.		Powder for bursting.		Diameter of Fuze Hole.				Thickness of Metal.
							Outside.		Inside.		
	lbs.	Inches.	lbs.	oz	lbs.	oz	Lines	Po.	Lines	Po.	Lines.
12 inch	150	12	17		5		15	9	15		16
10 ——	100	10	10		3		15	9	15		16
8 ——	43	8	4	1	1		12		11		10
6 ——	23	6	2	8		12	11		10	6	10

Dimensions of shells for guns and carronades made with an equal thickness of metal.

Kind.			42 Pr.	32	24	18	12
			Inches.	Inches.	Inches.	Inches.	Inches.
Guns.	Diameter of the shell	Exterior.	6·684	6.105	5·547	5·04	4·4
		Interior	4·404	4 005	3 767	3·4	2·8
	Thickness of metal - - -		1·14	1·05	0·89	0·82	0·8
	Diameter of fuze hole	Exterior	0·892	0 894	0·894	0·832	0·832
		Interior	0·826	0·826	826	·769	·769
	Powder for bursting - - oz.		14	11	12	9	5½
Carronades	Diameter of shell	Exterior	6·64	6·05	5·48	4·935	4 295
		Interior	4·30	3·95	3·48	3·235	2·695
	Thickness of metal - -		1·14	1·05	1·	·85	0·8
	Shell's weight - - - lbs.			22		12	
	Contains powder - - oz.			12½		9	
	Powder for bursting - - oz.			10		7	

Shells are likewise sometimes quilted into grape. See the word SHOT.

For the method of proving shells, see PROOF.

The Germans do not name their shells from the diameter of the bore which receives them, but from the weight of a stone ball that fits the same bore as the shell. Thus, a 7lb. howitzer admits a stone ball of that weight; the shell for this weighs 15 lb. and answers to the English 5 1-2 inch. The 30 lb. howitzer shell weighs 60 lb. and is rather more than 8 inches in diameter.

Shells were, till lately, made thicker at the bottom than at the fuze hole; but are now cast of the same thickness throughout, and are found to burst into a greater number of pieces in consequence.

Message-SHELLS, are nothing more than howitz shells, in the inside of which a letter, or other papers, are put; the fuze hole is stopt up with wood or cork, and the shells are fired out of a royal or howitz, either into a garrison or camp. It is supposed that the person to whom the letter is sent, knows the time, and accordingly appoints a guard to look out for its arrival.

SHELL. A particular part of a sword, which serves as a shield to the hand when it grasps the hilt. The British regulation sword, which is directed to be worn in a cross belt, has its shell so constructed that one side can fall down, by which means the hilt hangs more conveniently.

SHELL. A short jacket without arms, which was worn by light dragoons, and in some instances by the infantry, before the new regulations took place, respecting the clothing of the British army. At the commencement of the present war, some militia colonels derived no inconsiderable emolument from this mode of dress.

SHERISCHER-*war*, Ind. A word which corresponds with Saturday.

SHERISTA, *Ind.* An office; a registry; serishtadar, a linguist or secretary.

To SHIFT. In a military sense, to change place or station. Hence, to shift quarters. In the exercise, &c. of a battalion, officers commanding divisions are, upon particular occasions, such as marching past, &c. to shift from the right to the left, to conduct the heads of files, or the pivot flanks, in column or echellon. Whenever officers shift, they must pass briskly by the rear, and never along the front of the division. The covering serjeants always move with them.

The SHILLINGS. A phrase in familiar use among British army brokers, to express a certain profit or per centage which they gain in the sale, purchase, and exchange of commissions. The regulated price of a company in any regiment of foot being 1500*l.* only, that sum can be lodged at an agent's, or a banker's; but if the company be what is called in the market, the broker who transacts the business, receives one shilling in the pound, and in order to produce this premium, the purchaser gives 1500 guineas, out of which the shillings amounting to 75*l.* are paid to the broker, leaving the nett regulation untouched.

Head-quarter SHIP. The ship on which the commander in chief of an expedition is embarked, and from which signals are made for the commanding officers, adjutants, &c. of corps, to attend.

Hospital SHIP. The ship in which the sick and wounded soldiers, &c. are taken care of on expeditions, and during sea voyages.

Prison SHIP. A ship appropriated for the reception of prisoners of war, &c.

SHOCCA, *Ind.* Any letter written by the king.

SHOOKREWAR, *Ind.* A word which corresponds with Friday.

SHOOTING. See GUNNERY and PROJECTILE.

SHORTEN *your bridle.* A word of command used in cavalry, viz.

1st. Seize the upper end of the reins of the bridle, which is to lie on the right side of the horse, with the right hand.

2d. Bring it up as high as your chin, keeping your right elbow on a level with the shoulder.

3d. Slip your left hand along the reins of the bridle, and take hold of the loop or button, which is near the upper end of the reins.

4th. Slip the loop down with the left hand as low as the pommel of the saddle.

5th. Bring the right hand down with life on the right holster-cap, quitting the reins of the bridle with both hands.

SHORT-*roll*. See SIGNALS.

SHOT. A denomination given to all kinds of balls used for artillery and fire-arms; those for cannon being of iron, and those for guns and pistols, &c. of lead.

Grape
Chain } SHOT. See LABORATORY.
Case

To find the weight of an iron Shot whose diameter is given; and the contrary. *Rule*. Double the cube of the diameter in inches, and multiply it by 7; so will the product (rejecting the 2 last or right hand figures) be the weight in pounds.

Example. What is the weight of an iron shot of 7 inches diameter. The cube of 7 is 343, which doubled is 686, and this multiplied by 7 produces 4802, which with the right hand figures rejected, gives 48 pounds, the weight required.

N. B. This rule is sufficiently exact for practical uses.

To find the diameter of the Shot, when the weight is given. *Rule*. Multiply the cube root of the weight in pounds by 1.923, and the product is the diameter in inches.

Example. What is the diameter of an iron shot of 52 pounds? The cube root of 52 is 3.732, which multiplied by 1.923 gives 7.177 inches, the diameter required.

Rule by logarithms.

To 1-3d of the log. of 52	0.572001
Add the constant log.	0.283979
And the sum is the log. of the diameter 7.177	0.855980

To find the diameter of a SHOT, from the impression or cavity it makes by striking a brass gun, or other object. *Rule*. Divide the square of the radius of the cavity by the depth of it, and add the quotient to the depth; so will the sum be the diameter of the shot required.

Example. A shot having struck upon a brass gun, made a cavity of 1.49 inches deep, and 4.94 inches diameter; what was the size of the shot? The radius of the cavity is 2.47, and its square is 6.1009, which divided by the depth 1.49, the quotient is 4.1, to which adding 1.49, the sum 5.59 inches is the diameter required, answering to a 24 pounder.

SHOT.—*Rules for finding the number in any pile.*

Triangular pile.

Multiply the base by the base + 1, this product by the base + 2, and divide by 6.

Square pile.

Multiply the bottom row by the bottom row + 1, and this product by twice the bottom row + 2, and divide by 6.

Rectangular piles.

Multiply the breadth of the base by itself + 1, and this product by 3 times the difference between the length and breadth of the base, added to twice the breadth + 1, and divide by 6.

Incomplete piles.

Incomplete piles being only frustrums, wanting a similar small pile on the top, compute first the whole pile as if complete, and also the small pile wanting at top; and then subtract the one number from the other.

Rules for finding the dimensions and weight of shot.

The weight and dimensions of shot or shells might be found by means of their specific gravities; (see the word GRAVITY,) but they may be found still easier, by means of the experimented weight of a ball of a given size, from the known proportion of similar figures, namely, as the cubes of their diameters.

1st. *To find the weight of an iron ball from its diameter.*—An iron ball of 4 inches diameter weighs 9 lb. and the weights being as the cubes of their diameters, it will be as 64, (the cube of 4,) is to 9, so is the cube of the diameter of any other ball to its weight.

2d. *To find the weight of a leaden ball.*—A leaden ball of 4½ inches diameter weighs 17 lb. therefore, as the cube of 4½ is to 17, (as 9 to 2 nearly,) so is the cube of the diameter of any leaden ball to its weight.

3d. *To find the diameter of an iron ball.*—Multiply the weight by 7 1 9 and the cube root of the product will be the diameter.

4th. *To find the diameter of a leaden ball.* Multiply the weight by 9, and divide the product by 2; and take the cube root of the quotient for the diameter.

Table of diameters of English iron round shot:

Kind.	68	42	32	24	18	12	9	6	3	1
Inches	8·	6·684	6·105	5·547	5·040	4·403	4·000	3·498	2·775	1·92

Diameter of French iron round shot in English inches.

Kind	-	-	36	24	16	12	8	4
Inches	-	-	6·648	5·808	5·074	4·610	4·027	3·196

Table of grape shot, for sea and land service.

Kind.	Weight of each shot.		Total weight of the grape complete.		
	lbs.	oz.	lbs.	oz.	
42 pounders	4	0	46	6	
32 ——	3	0	34	1	
24 ——	2	0	25	5	
18 ——	1	8	19	15	1-2
12 ——	1	0	10	15	
9 ——	0	13	7	6	
6 ——	0	8	5	8	1-2
4 ——	0	6	3	14	1-2
3 ——	0	0	2	10	1-2
1-2 ——	0	¾ lead		8	¾

Table of English case shot for different services.

Sea service.

Kind.	Weight of each shot.	Number in each case.	Weight of each case filled.	
Pr	oz	No.	lbs.	oz
32	8	70	33	8
24	8	42	22	15
18	6	42	15	8
12	4	42	11	5
9	3	44	8	9
6	2	40	5	2
4	2	28	4	—
3	2	20	2	15
1	1½	12	1	2¼

Carronades.

Kind.	Weight of each shot.	Number in each case.	Weight of each case filled.	
Pr	oz.	No.	lbs	oz.
68	8	90	46	2
42	8	66	32	8
32	8	40	21	4
24	8	32	16	1
18	6	31	12	2
12	4	32	8	2

Common land service.

Pr	oz.	No	lbs.	oz
24	4	84	21	11
12	2	84	12	1
6	1 1-2	55	5	10½
3	1 1-4	52	2	14

Tier shot for field service.

	oz.	n	lbs.	oz.
12pr.	18	15	18	8
Med.	6½	42	17	11
6 pr.	8-	15	9	—
Med.	3-	42	8	14
3 pr.	4-	15	4	10
Med.	1-	42	4	6
12pr.	14	12	14	14
light	6	34	14	11
6 pr.	8-	12	7	3
light	3-	34	7	7
3 pr.	4-	12	3	10
light	1-	34	3	11

Table of case shot.—Continued.

	For mortars				Howitzers.			
Kind.	Weight of each shot.	No. of shot in each.	Weight of case filled.		Weight of each shot	No. of shot in each.	Weight of case filled.	
In.	oz.	No	lbs.	oz.	oz.	No.	lbs.	oz.
10	8	170	91	8	—	—	—	—
8	6	90	38	4	6	90	38	8
5½	3	55	12	6	3	55	12	8
4-	2	55	8	1	2	55	8	2

Small shells, as 4 2-5 inches, and hand grenades were quilted into grape for 13 inch mortars at Gibraltar. The fuzes were turned inwards next the iron tompion, and leaders of quick match for communicating fire to the fuzes were introduced through holes made in the wooden bottom, and placed as near the fuzes as possible in the centre of the grape. These answered very well for short ranges.

Hot Shot.—The powder for firing with hot shot must be in strong flannel cartridges, without any holes, lest some grains should remain in the bore, in putting the cartridge home. Over the powder must be rammed a good dry wad, then a damp one, and then the hot shot; and if the gun lays at a depression, there must be a wad over the shot, which may be rammed home. If the above precautions be attended to, the gun may be pointed after being loaded, without the smallest danger, as it is well known that the shot will grow cold in the gun, without burning more than a few threads of the wads next it. This is not the mode usually taught of loading with hot shot, but is that which was practised during the siege of Gibraltar. Mr. Durtubie proposes putting the shot when heated, into a tin cannister, as an effectual method of preventing accidents

The grates usually made for heating shot will generally make them red hot in three-fourths of an hour.

SHOULDER. The upper part of the blade of a sword is so called. The shoulders of regimental sword-blades, for the infantry, should be one inch broad at least.

Shoulder *of a bastion*. In fortification. See Epaule.

Shoulder-*belt*, so called because it hangs over the shoulder, to carry the bayonet or sword: it is made of strong leather

To SHOULDER In a military sense; to lay on the shoulder, or to rest any thing against it. Hence to shoulder a musquet.

Shoulder *arms*. A word of command which is used in the manual exercise. See Manual.

Right Shoulders *forward.* } Two
Left Shoulders *forward.* } terms
of command in the British service, when a column of march (in order to follow the windings of its route) changes its direction in general, less than the quarter of the circle. This is a clumsy translation of the *line of science*, or oblique facing of the French system; the proper word of command is *half* or *quarter face* to the right or left.

SHROF, *Ind.* A banker; a money-changer, or one who keeps a shop for the accommodation of the public in pecuniary matters, and who derives considerable advantage from the circulating medium of other people's property.

SHROFFING, *Ind.* The act of examining and sorting money.

SHUMSERTREEPUT, *Ind.* Avowal, acknowlegement, confession.

To SHUT. To close; to make not open.

SHUT *pans*. A word of command used in the inspection of arms. Place the inside of your fingers against the back part of the hammer, and bring it briskly to in one motion. In opening pans, you place the thumb against the inside of the hammer.

SHUTERNAUL, *Ind.* A sort of arquebuss, which is fixed upon the back of a camel.

SICK and *hurt*. A board so called, to which the agents, commissaries, &c belonging to the several military hospitals in Great Britain, are responsible.

SIDE-*pieces*, of *gun-carriages*. See Carriages.

Side-*str*
iron bands
in those pla
cross the
the centre
SIEGE,
which an
ment befor
for the purp
comes fron
chair, &c.
place, sign
chuse a po
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32 ——	3	0	34	1
24 ——	2	0	25	5
18 ——	1	8	19	15 1-2
12 ——	1	0	10	15
9 ——	0	13	7	6
6 ——	0	8	5	8 1-2
4 ——	0	6	3	14 1-2
3 ——	0	0	2	10 1-2
1-2 ——	0	¾ lead		8 ¾

Table of English case shot for different services.

Sea service.				
Kind.	Weight of each shot.	Number in each case.	Weight of each case filled.	
Pr	oz	No.	lbs.	oz
32	8	70	33	8
24	8	42	22	15
18	6	42	15	8
12	4	42	11	5
9	3	44	8	9
6	2	40	5	2
4	2	28	4	—
3	2	20	2	15
1	1¼	12	1	2¼

Carronades.				
Kind.	Weight of each shot.	Number in each case.	Weight of each case filled.	
Pr	oz.	No.	lbs	oz.
68	8	90	46	2
42	8	66	32	8
32	8	40	21	4
24	8	32	16	1
18	6	31	12	2
12	4	32	8	2

Common land service.

Pr	oz.	No	lbs.	oz
24	4	84	11	11
12	2	84	12	1
6	1 1-2	55	5	10½
3	1 1-4	52	2	14

Tier shot for field service.

	oz.	no	lbs.	oz.
12pr.	18	15	18	8
Med.	6½	42	17	11
6 pr.	8-	15	9	—
Med.	3-	42	8	14
3 pr.	4-	15	4	10
Med.	1-	42	4	6
12pr.	14	12	14	14
light	6	34	14	11
6 pr.	8-	12	7	3
light	3-	34	7	7
3 pr.	4-	12	3	10
light	1-	34	3	11

Table of case shot.—Continued.

For mortars.					Howitzers.			
Kind.	Weight of each shot.	No. of shot in each.	Weight of case filled.		Weight of each shot	No. of shot in each.	Weight of case filled.	
In.	oz.	No	lbs.	oz.	oz.	No.	lbs.	oz.
10	8	170	91	8	—	—	—	—
8	6	90	38	4	6	90	38	8
5⅗	3	55	12	6	3	55	12	8
4-	2	55	8	1	2	55	8	2

Small shells, as 4 2-5 inches, and hand grenades were quilted into grape for 13 inch mortars at Gibraltar. The fuzes were turned inwards next the iron tompion, and leaders of quick match for communicating fire to the fuzes were introduced through holes made in the wooden bottom, and placed as near the fuzes as possible in the centre of the grape. These answered very well for short ranges.

Hot Shot.—The powder for firing with hot shot must be in strong flannel cartridges, without any holes, lest some grains should remain in the bore, in putting the cartridge home. Over the powder must be rammed a good dry wad, then a damp one, and then the hot shot; and if the gun lays at a depression, there must be a wad over the shot, which may be rammed home. If the above precautions be attended to, the gun may be pointed after being loaded, without the smallest danger, as it is well known that the shot will grow cold in the gun, without burning more than a few threads of the wads next it. This is not the mode usually taught of loading with hot shot, but is that which was practised during the siege of Gibraltar. Mr. Durtubie proposes putting the shot when heated, into a tin cannister, as an effectual method of preventing accidents

The grates usually made for heating shot will generally make them red hot in three-fourths of an hour.

SHOULDER. The upper part of the blade of a sword is so called. The shoulders of regimental sword-blades, for the infantry, should be one inch broad at least.

Shoulder *of a bastion*. In fortification. See Epaule.

Shoulder-*belt*, so called because it hangs over the shoulder, to carry the bayonet or sword: it is made of strong leather

To SHOULDER. In a military sense; to lay on the shoulder, or to rest any thing against it. Hence to shoulder a musquet.

Shoulder *arms*. A word of command which is used in the manual exercise. See Manual.

Right Shoulders *forward*. } Two
Left Shoulders *forward*. } terms
of command in the British service, when a column of march (in order to follow the windings of its route) changes its direction in general, less than the quarter of the circle. This is a clumsy translation of the *line of science*, or oblique facing of the French system; the proper word of command is *half* or *quarter face* to the right or left.

SHROF, *Ind*. A banker; a money-changer, or one who keeps a shop for the accommodation of the public in pecuniary matters, and who derives considerable advantage from the circulating medium of other people's property.

SHROFFING, *Ind*. The act of examining and sorting money.

SHUMSERTREEPUT, *Ind*. Avowal, acknowlegement, confession.

To SHUT. To close; to make not open.

SHUT *pans*. A word of command used in the inspection of arms. Place the inside of your fingers against the back part of the hammer, and bring it briskly to in one motion. In opening pans, you place the thumb against the inside of the hammer.

SHUTERNAUL, *Ind*. A sort of arquebuss, which is fixed upon the back of a camel.

SICK and *hurt*. A board so called, to which the agents, commissaries, &c belonging to the several military hospitals in Great Britain, are responsible.

SIDE-*pieces*, of *gun-carriages*. See Carriages.

Side-*straps*, in a *field carriage*, are flat iron bands which go round the side-pieces, in those places where the wood is cut across the grain, to strengthen them near the centre and the trail.

SIEGE, (*Siege*, Fr.) The position which an army takes, or its encampment before a fortified town, or place, for the purpose of reducing it. The term comes from *siege*, which signifies seat, chair, &c. Hence; to sit down before a place, signifies in a military sense, to chuse a position from which you may commence the necessary operations to attack and get possession of it. The French use the word generally as we do.

To undertake the Siege *of a town*. *Entreprendre le siege d'une Ville*. To invest it, to form lines of circumvallation, to open trenches, &c.

To lay Siege *to a town*, (*faire le siége d'une ville*, Fr.) To draw your forces round a town, for the purpose of attacking it.

To carry on a Siege, (*continuer un siége*, Fr.) To persevere by regular approaches, &c. in gaining ground upon the garrison.

To *lay close* Siege, (*presser le siége*, Fr.) To approach close to the walls for the purpose of making a breach and storming, or of starving out the garrison. For a full and scientific explanation of the different methods, which are adapted in modern times, for the attack or defence of places, particularly of sieges, see *Essai General de Fortification, d'attaque et defense de places*, tom. 1, page 61, &c. &c.

Siege *brusque*, Fr. An expression used among the French, to signify the prompt and immediate movement of a besieging army, against a fortified town or place, without waiting for the regular formation of lines, &c. In this case the troops make a vigorous attack upon all the outworks, and endeavour to make a lodgment upon the counterscarp. When they have succeeded, they instantly throw up temporary lines, &c. behind them, in order to secure a retreat, should the garrison force them to quit their ground.

SIEGE, in the *art of war*, is to surround a fortified place with an army, and approach it by passages made in the ground, so as to be covered against the fire of the place.

The first operation of a *siege* is investing. The body of troops investing a town should, at least, be as strong again as the garrison: so as to be able to divide itself into several parties, in order to take possession of all the avenues leading to the place. By day they should keep themselves out of cannon shot: but as soon as it is dusk they must approach much nearer, the better to be able to support each other, and to straiten the town.

General phrases and terms used at a Siege *are, viz.*

To besiege a place. See Siege.

To accelerate the Siege, (*Presser le Siege*, Fr.) is when an army can approach so near the place as the covert-way, without breaking ground, under favor of some hollow roads, rising grounds, or cavities, and there begin their work.

An attack, is when the besieging army can approach the town so near as to take it, without making any considerable works.

To form the Siege, *or lay siege to a place,* (*Mettre le Siege à une place,* Fr.) there must be an army sufficient to furnish five or six reliefs for the trenches, pioneers, guards, convoys, escorts, &c. and artillery, with all the apparatus thereto belonging; magazines furnished with a sufficient quantity of all kinds of warlike stores; and a general hospital, with physicians, surgeons, medicines, &c.

To raise a Siege, (*Lever le Siege,* Fr.) is to give over the attack of a place, quit the works thrown up against it, and the posts formed about it. If there be no reason to fear a sally from the place, the *siege* may be raised in the day-time. The artillery and ammunition must have a strong rear guard, lest the besieged should attempt to charge the rear: if there be any fear of an enemy in front, this order must be altered discretionally, as safety and the nature of the country will admit.

To turn a Siege *into a blockade,* (*Convertir le Siege en blocus,* Fr.) is to give over the attack, and endeavor to take it by famine; for which purpose all the avenues, gates, and streams, leading into the place, are so well guarded, that no succor can get in to its relief.

To insult a work, to attack it in a sudden and unexpected manner, with small arms, or sword in hand.

Surprise, is the taking a place by stratagem or treason.

To escalade a place, is to approach it secretly, then to place ladders against the wall, or rampart, for the troops to mount and get into it that way.

To petard a place, is privately to approach the gate and fix a petard to it, so as to break it open for the troops to enter.

Line of circumvallation, is a kind of fortification, consisting of a parapet, or breast-work, and a ditch before it, to cover the besiegers against any attempt of the enemy in the field

Line of countervallation, is a breastwork, with a ditch before it, to cover the besiegers against any sally from the garrison, in the same manner that the line of circumvallation serves to protect them in the field.

Lines, are works made to cover an army, so as to command a part of the country, with a breast-work and a ditch before it.

Retrenchment, a work made round the camp of an army, to cover it against any surprise.

Line of counter-approach, a trench which the besieged make from the covert-way to the right and left of the besiegers attacks, in order to scour their works. This line must be perfectly enfiladed from the covert-way and the half-moon, &c that it may be of no service to the enemy, in case he gets possession of it.

Batteries at a *siege,* cannot be erected till the trench is advanced within reach of the cannon of the place; that is, within what is generally understood to be a point-blank range, which is reckoned about 300 toises, or 1800 feet.

Cannon is made use of at a *siege* for two different purposes; the first to drive away the enemy from their defences; and the second, to dismount their guns. To produce these two effects, the batteries should not be above the mean reach of cannon-shot from the place: therefore there is no possibility of constructing them, till the first parallel is formed; and as the distance of the first parallel from the second is generally 300 toises, the batteries must be on this line, or beyond it, nearer the town.

The construction of batteries belongs to the officers of the royal artillery, who generally consult with the engineer that has the direction of the siege, as well about their situation as about the number of their guns and mortars. They must be parallel to the works of the town which they are to batter. It is customary to place the mortar-batteries and gun-batteries side by side, and in the same line, to the end that they may batter the same parts. The use of both is to demolish the enemy's works, to dismount their guns, to penetrate into their powder magazines, and to drive the besieged from their works and defences; as also to ruin and destroy the principal buildings, by setting fire to the town; and to fatigue and distress the inhabitants in such a manner, that they shall press the garrison to surrender.

To sally at a siege, is to go privately out of a besieged town, fall suddenly upon the besiegers, and destroy part of their works, spike their cannon, and do every other possible damage.

A sally, a secret movement which is made out of a besieged town or place, by a chosen body of troops, for the purpose of destroying an enemy's out-works, &c. Sallies are seldom made when the garrison is weak; for although they molest the enemy, and keep him on the alert, yet the chance of losing men renders it prudent to keep within the works.

Saps in a *siege,* are trenches made under cover from the fire of the place, behind a mantlet or stuffed gabion: they are generally ten or twelve feet broad.—This work differs from the trenches, in as much as the latter are made uncovered. The sap has also less breadth; but when it is as wide as the trench, it bears the same name. There are various sorts of saps, viz.

Single sap, is that which is made on

one side only, or, which is the same thing, has only one parapet.

Double Sap, has a parapet on each side, and is carried on wherever its two sides are seen from the place.

Flying sap, is that in which the besiegers do not give themselves the trouble of filling the gabions with earth: it is made where the workmen are not much exposed, and in order to accelerate the approaches.

Sap-faggots, are a kind of fascines, but only three feet long, and about six inches in diameter.

Saucissons, are another species of fascines, from 12 to 19 feet long, and from 8 to 10 inches in diameter, and are used in making batteries, and repairing the breaches.

Sortie. See SALLY.

Tail, or *rear of the trench*, (*Queue de la tranche*, Fr.) is the first work the besiegers make when they open the trenches.

Tambour, is a kind of traverse, at the upper end of the trench or opening made in the glacis to communicate with the arrows. This work hinders the besiegers from being masters of the arrow, or discovering the inside of the place of arms belonging to the covert-way.

Traverse, in a *siege*, a kind of retrenchment which is made in the dry ditch, to defend the passage over it.

Trenches, are passages or turnings dug in the earth, in order to approach a place without being seen from its defences.

Wool-packs, used in a *siege*, differ from sand-bags, in this only, that they are much larger, and, instead of earth, they are filled with wool. They are used in making lodgments in places where there is but little earth, and for other similar purposes. They are about five feet high, and 15 inches in diameter.

Rear of an attack, is the place where the attack begins.

Front, or head of an attack, that part next to the place.

Mantlets, are wooden fences, rolling upon wheels, of two feet diameter; the body of the axle-tree is about four or five inches square, and four or five feet long; to which is fixed a pole of eight or ten feet long, by two spars; upon the axle-tree is fixed a wooden parapet, three feet high, made of three-inch planks, and four feet long, joined with dowel-pins, and two cross-bars: this parapet leans somewhat towards the pole, and is supported by a brace, one end of which is fixed to the pole, and the other to the upper part of the parapet. Mantlets are used to cover the sappers in front against musquet shot.

Maxims in SIEGES are, 1st. The approaches should be made without being seen from the town, either directly, obliquely, or in the flank.

2. No more works should be made than are necessary for approaching the place without being seen; *i. e.* the besiegers should carry on their approaches the shortest way possible, consistent with being covered against the enemy's fire.

3. All the parts of the trenches should mutually support each other; and those which are farthest advanced, should be distant from those that defend them above 120 or 130 toises, that is, within musquet shot.

4. The parallels, or places of arms the most distant from the town, should have a greater extent than those which are the nearest, that the besiegers may be able to take the enemy in flank, should he resolve to attack the nearest parallels.

5. The trench should be opened or begun as near as possible to the place, without exposing the troops too much, in order to accelerate and diminish the operations of the siege.

6. Care should be taken to join the attacks; that is, they should have communications, to the end that they may be able to support each other.

7. Never to advance a work, unless it be well supported; and for this reason, in the interval between the 2d and 3d place of arms, the besiegers should make, on both sides of the trenches, smaller places of arms, extending 40 or 50 toises in length, parallel to the others, and constructed in the same manner, which will serve to lodge the soldiers in, who are to protect the works designed to reach the third place of arms.

8. Take care to place the batteries of cannon in the continuation of the faces of the parts attacked, in order to silence their fire; and to the end that the approaches, being protected, may advance with great safety and expedition.

9. For this reason the besiegers shall always embrace the whole front attacked, in order to have as much space as is requisite to place the batteries on the produced faces of the works attacked.

10. Do not begin the attack with works that lie close to one another, or with reentrant angles, which would expose the attack to the cross fire of the enemy.

Stores required for a month's SIEGE *are as follows:*

Powder, as the garrison is more or less strong		8 or 900,000 lb.
Shot	for battering pieces	6000
	of a lesser sort	20,000
Battering cannon		80
Cannons of a lesser sort		40
Small field-pieces for defending the lines		20
Mortars for throwing	shells	24
	stones	12
Shells for mortars		15 or 16,000
Hand-grenades		40,000
Leaden bullets		180,000
Matches in braces		10,000
Flints for musquets, best sort		100,000
Platforms complete for guns		100
Platforms for mortars		60

Spare	carriages for guns .	60
	mortar-beds . .	60
	spunges, rammers, and ladles, in sets . .	20
Tools to work in trenches .		40,000

Several hand-jacks, gins, sling-carts, travelling forges, and other engines proper to raise and carry heavy burdens; spare timber, and all sorts of miner's tools, mantlets, stuffed gabions, fascines, pickets, and gabions.

SIENS, *Fr.* The plural of sien, *his, her's* or *one's* own. This word is used among the French, to signify the same as *gens*, men, people, soldiers; viz. *ce général fut abandonné par les siens.* That general was abandoned by his own soldiers.

SIEVE, an instrument, which by means of hair, lawn, or wire, is capable of separating the fine from the coarse parts of any powder. See GUNPOWDER, LABORATORY, &c.

SIFFLEMENT, *Fr.* Literally means the noise of a whistle. It is used to express the sound which a ball or bullet makes when it cuts the air; as *sifflement des armes à feu.* The whistling or whizzing noise of fire arms.

SIES or **SHIAS**, *Ind.* A tribe of people in the N. West of India.

SIFFLET, *Fr.* A whistle. The French make use of the whistle on board their ships in the same manner as we do. It answers the same purpose at sea, that the drum and trumpet do on shore. The boatswain's whistle pipes all hands up, as occasion requires in a ship; and the drum and trumpet collect troops together, in camp, garrison, or elsewhere.

SIG, an old Saxon word, importing victory.

SIGHT, (*La Mire*, Fr.) a small piece of brass or iron which is fixed near to the muzzle of a musquet or pistol, to serve as a point of direction, and to assist the eye in levelling.

SIGN, a sensible mark or character, denoting something absent or invisible. As the trace of a foot, the hand-writing or mark of a man; also the subscription of one's name.

SIGN *Manual.* The king's signature is so called. All commissions in the regular army of Great Britain, army warrants, &c. bear the sign manual. The appointments of officers in the volunteers have been so distinguished during the present war. Adjutants only in the militia have their commissions signed by the king; those of the field officers, captains, and subalterns, &c. are signed by the lords lieutenants of counties, or by their deputies for the time being, sanctioned by a previous intimation from the secretary of state, that the king does not disapprove of the names which have been laid before him.

SIGNAL, (*Signal*, Fr.) Any sign made by sea or land, for sailing, marching, fighting, &c. Signals are likewise given by the short and long rolls of the drum, during the exercise of a battalion

SIGNAL, in the *art of war*, a certain sign agreed upon for the conveying intelligence, where the voice cannot reach. *Signals* are frequently given for the beginning of a battle, or an attack, usually with drums and trumpets, and sometimes with sky-rockets, &c.

SIGNAL *of attack or assault*, (*Signal d'une attaque, ou d'une assaut*, Fr.) This signal may be given in various ways. By the discharge of a lighted shell, by sky-rockets, by colors displayed from a conspicuous spot, &c. In 1747 marshal Lowendal made use of lighted shells or bombs, when he laid siege to the town of Bergen-op-zoom. During the consternation of the inhabitants, which was excited by a continual discharge of these signal shells, the grenadiers entered a practicable breach, and took the town by storm.

SIGNAL-*flags* in *ancient military history*, was a gilded shield hung out of the admiral's gallery; it was sometimes a red garment or banner. During the elevation of this the fight continues, and by its depression or inclination towards the right or left, the rest of the ships were directed how to attack their enemies, or retreat from them.

SIGNALS *made by the colors of an army*, (*Signaux des enseignes*, Fr.) The ancients had recourse to all the various methods which could be used by signals, to express the particular situation of affairs, and to indicate measures that should be adopted. If, during an engagement, victory seemed inclined more to one side than another, the colors belonging to the victorious party were instantly bent towards its yielding antagonist. This signal was conspicuous to the men, and excited them to fresh efforts. They imbibed the most lively hopes of success, and eagerly pressed forward to reap the advantages of bravery and good conduct.

When an army was hard pressed by its enemy, the colors of the former were raised high in the air, and were kept in a perpetual flutter and agitation, for the purpose of conveying to the soldiers, that the issue of the battle was still doubtful, and that nothing but courage and perseverance could determine the victory. If, in the heat of action, any particular regiment seemed to waver and give way, so as to cause an apprehension that it might finally be broken, its colors were instantly snatched out of the bearer's hands by the general or commanding officer, and thrown into the thickest of the enemy. It frequently happened that the men who were upon the point of yielding ground and flying, received a fresh impulse from this act, rallied, and by a desperate effort of courage recovered the colors, and restored the day. This method of re-animating their legions was generally resorted to by the Romans. We have had instances in modern times, where the fortune of the day has been wholly decided by some sudden and unexpected act of an individual. In the reign of Louis XIV. a private soldier threw his hat into the midst of the enemy during a hard fought and doubtful battle, expressing thereby that fresh succours were arrived to strengthen the French army. This circumstance, so apparently trifling, produced the desired effect. It threw the enemy into confusion, gave the French fresh spirits, and finally determined the victory in their favor. We read of various instances in which signals have been used to express the personal danger of a king or general, who was fighting at the head of a eslect body of men. The knowlege of the critical position in which their leader stood, excited fresh courage in the rest of the troops, and drove them to acts of the greatest intrepidity. In the course of the present war some examples of the same sort might be adduced, both on the side of Austria, and on that of France. The bridge of Lodi, the passage of the Tagliamento, &c. would illustrate any observations we could make upon the subject.

Nor are the advantages which arise from the use of signals confined to these particular cases. Various circumstances grow out of the desultory nature of military operations, to render flags of communication indispensibly necessary. The vast scope which is given to modern tactics, makes it impossible that the human eye or voice should take in all the critical manœuvres or evolutions which occur, when an extended line is actually engaged. The right wing may be giving way while the left is gaining ground, and the centre might be in danger while the two flanks were rapidly advancing with apparent security against the enemy. Under these circumstances a general, by means of communicating signals, might be enabled to provide for every contingency, without losing time by sending his orders verbally. Although signal flags, in modern engagements, have been generally laid aside, their use has been acknowleged in the adoption of warlike instruments, which, by the variety of their sounds, convey the necessary directions to an engaging army.

The ancients had signals which they called *mute signals*, *(signaux mutes.)*—These consisted in certain actions or signs that were made by a general; such as waving the hand, brandishing a stick or sword, or by exhibiting to view any part of his dress, accoutrements, &c. Instances of the same kind have occurred among the moderns. Under this denomination may likewise be classed the different signals which are made for the movement, marching, and manœuvring of troops in and out of quarters When troops are scattered or separated from one another, it is usual to communicate by means of fires lighted upon eminences during the night, and by smoke during the day.

In former times large pieces of wood were hung above the towers of cities or castles, which, by being drawn up or lowered, gave intelligence of what passed. This method has been succeeded by the invention of telegraphs, which answer every purpose of communication, when they can be established through an extent of country. At the battle of Fleurus, the French employed baloons, to which cords were attached, able officers elevated in the air sent down, by the cords, an account of the movements of the Austrians, a signal thus conveyed enabled Jourdan to direct a tremendous battalion fire, and a heavy charge of cavalry, by which the battle was decided. Besides those signals, there are others which may be called *vocal* and *demi-vocal* The vocal signals are those of the human voice, which consist in the necessary precautions that are adopted to prevent a guard or post from being surprised, to enounce words of command in action, &c. Of the first description are paroles and countersigns, which are exchanged between those to whom they are intrusted, and which are frequently altered, during the day and night, to prevent the enemy from receiving any information by means of spies. The demi-vocal signals are conveyed by military instruments; the different soundings of which indicate, instantaneously, whether an army is to halt or to advance, whether troops are to continue in the pursuit of an enemy, or to retreat.

The demi-vocal signals, directed to be observed in the British service, as far as regards the manœuvring of corps, &c. consist of signals for the government of light infantry, and of cavalry regiments, squadrons, or troops: the latter are properly called soundings. Rifle or light infantry signals are to give notice—to *advance*; to *retreat*; to *halt*; to *cease* firing; to *assemble*, or call in all parties. Those signals should be always considered as fixed and determined ones, and are never to be changed. The bugle horn of each company should make himself perfect master of them. All signals are to be repeated; and all those signals which are made from the line or column, are to convey the intention of the commanding officer of the line to the officer commanding the light infantry, who will communicate them to the several companies or detachments either by word or signal.

SIGNAL-*staff*. In matters of military parade it is usual to fix a flag, somewhat larger than a camp color, to point out the spot where the general or officer commanding takes his station in front of a line This is called the signal staff.

SIGURGHAL, *Ind.* A feudal tenure.

SIGUETTE, *Fr.* The same as cavesson, a sort of noseband, sometimes made of iron, and sometimes of leather, or wood; sometimes flat, and sometimes hollow or twisted; which is put upon the nose of a horse, to forward the suppling and breaking of him.

SILENCE, (*Silence*, Fr.) This word is used by the French as a caution to soldiers to prepare for any part of the military duty or exercise. The French have likewise another term which corresponds with our word attention. See GARDE. We use *Attention* in both instances.

SILHATARIS, *Fr.* See SPAHIS.

SILLAGE, *Fr.* The wake of a ship; the trace which a vessel leaves astern when she moves forward.

SILLON, in *fortification*, is a work raised in the middle of a ditch, to defend it when it is too wide. It has no particular form, and is sometimes made with little bastions, half-moons, and redans, which are lower than the works of the place, but higher than the covert way. It is more frequently called *envelope*, which see.

SIMILAR *polygons*, are such as have their angles severally equal, and the sides about those angles proportional.

To SIMPLIFY. This word has been adopted amongst men of business and arrangement, from the French *simplifier*, which means to relate the bare matter of fact. This signification likewise reaches every species of analysis, &c. Thus the advantage of the new manual over the old, is owing to the reduction of the latter into fewer motions and words of command, by which that exercise has been considerably simplified. The oblique facings, under the denomination of *quarter facings*, *half facings*, of single files; the half wheelings, quarter wheelings, and half quarter wheelings of sections, platoons, divisions, and battalions, are all more simple in the new discipline than the methods of the old.

SINE. In geometry, a right *sine*, is a right line drawn from one end of an arch perpendicularly upon the diameter drawn from the other end of the arch.

SINES. See table of *Natural Sines*, at the end of the word GUNNERY.

SINGE, *Fr.* An instrument so called. See PENTAGRAPH.

SINGLE *combat*, a contest in which not more than *two* are engaged.

SINUS, *Fr.* See LINE for its geometrical acceptation.

SINUS, in English, signifies a bay of the sea, an opening of the land; any fold or opening.

SINUSOIDE, *Fr.* A geometrical curve, which has been imagined by Monsieur Belidor, for the purpose of balancing or preserving the equipoise of a drawbridge. See *Science des Ingénieurs*, liv. iv. See likewise the specific construction of this curve as explained by the marquis de l'Hopital, in a book intitled, *Acta Eruditorum*, published at Leipsic in 1695; and demonstrated by M. Bernouilli, who discovered that this curve was nothing more than the epicycloid, which see.

SIPHON, (*Syphon*, likewise *Ciphon*, Fr.) In hydraulics, a crooked tube, one leg or branch whereof is longer than the other. It is used in the raising of fluids, emptying of vessels, and in various hydrostatical experiments.

SIRKAR, *Ind.* The government.

SIROC. From Sirius, the dog-star. The wind, which we call south-east, is so called in Italy.

To SIT. In a military sense, to take a stationary position; as, *To sit before a fortified place;* to lie encamped for the purpose of besieging it. The French use the word *asseoir* as an active verb with respect to military matters, viz. *asseoir un camp*, to pitch a camp. *Il assit son camp hors de la portée du canon de la ville;* he pitched his camp out of the range of the town's cannon.

SIXAIN. Sixth, Sexagena, in war, an ancient order of battle, wherein six battalions being ranged in one line, the second and fifth were made to advance, to form the *van* guard; the first and sixth to retire to form the *rear* guard; the third and fourth remaining to form the main corps. The word is derived from the French, which signifies the same thing. The sixain order of battle may be formed with all the battalions whose number is produced by the number six.—Twelve battalions, for instance, may be ranged in order of battle, by forming two *sixains*, and eighteen battalions, ditto by forming three *sixains*, and so on progressively.

To SIZE. In a military sense to take the height of men for the purpose of placing them in military array, and of rendering their relative statures more effective. In all infantry regiments the sizing begins from flanks to centre, the tallest men being placed upon the right and left of the several companies in the front rank, and the shortest in the centre and rear ranks. By the old cavalry discipline the flank troops of a squadron must be sized in the following manner: That of the right flank, from right to left; that of the left flank, from left to right; the centre one from centre to flanks; the tallest man must, of course, be always in the part where the sizing begins, excepting the corporals, one of whom must be on each flank of the front rank of the troop, covered by a clever soldier in the rear rank. If there be only two troops in a squadron, they size the right from the left, and the left from the right flank. The modern practice now is to size all troops from the centre, beginning by sizing from the right, doubling and countermarching a rank.

SKEAN, *Celtic*. A knife. This word is sometimes written skeen, or skeine. It signifies a weapon, in the shape of a small sword or knife, which was anciently worn by the Irish.

SKELETON. This word is frequently applied to regiments that are extremely reduced in their number of men. Thus a British regiment that went out to St. Domingo 1000 strong, and returned to England with 20 or 30 men only, was called a skeleton regiment.

Skeleton *plan*. See Outline.

SKETCH See ditto.

SKILL. Knowlege in any particular art As

Military Skill. M. Belleisle, the French general, after the example of Xenophon, the Greek, undertook in the month of December 1742, to withdraw the French army from Pragu., where it was at that time shut up, and to march over the enemy's country, through a road of 38 leagues, upwards of 124 English miles, covered with ice, and over mountains whose precipices were concealed under the snow, having, besides, an army of between eighteen and twenty thousand men, under the command of prince Lobkowitz, to fight with. For the particulars of this famous retreat, which in count Turpin's words, deserves to be written by Xenophon himself. See page 2, vol. I. of his Art of War.

SKINS. Sheep skins are made use of to cover the mortars or howitzers between firing, to prevent any wet or dampness getting into them.

SKIRMISH, in *war*, a loose, desultory kind of combat, or encounter, in presence of two armies, between small parties who advance from the main body for that purpose, and invite to a general fight.

Skirmishers. Detached parties of light troops sent out in front of a battalion, &c. riflemen.

SKIRT. In a general acceptation, edge, border, extreme part. As the skirt of a country, the skirts of a wood.

SKY-ROCKET. See Rocket.

SLASH, a cut; a wound; also a cut in cloth. It is used to express the pieces of tape or worsted lace which are upon the arms of non-commissioned officers and corporals, to distinguish them from the privates.

SLASHED, cut in stripes or lines. Hence *slashed* sleeves and pockets, which are peculiar to the British cavalry, when the officers or men wear long coats.

Slashers. A nickname which was given during the American war to the British 28th regiment of foot, and which took its origin from the following circumstance: One Walker, a magistrate in Canada, having, during a severe winter, with great inhumanity, refused to give comfortable billets to the women belonging to the 28th, and some of them having perished in consequence of the inclemency of the season, so great was the resentment of the corps, that some officers dressed themselves like savages, entered his house whilst he was sitting with his family, danced round the table, and suddenly pulling him back upon his chair, cut off both his ears. They instantly disappeared. The deed was not discovered until after their departure. From this circumstance, and in consequence of various intrepid actions which the 28th performed during the course of the war, the men obtained the name of *slashers*.

SLATE, in military architecture, a kind of bluish fossile stone, very soft when dug out of the quarry, and therefore easily slit or sawed into thin long squares, to serve instead of tiles for the covering of all kinds of military buildings, &c.

SLAUGHTER, destruction by the sword, bayonet, and firearms.

SLEDGE, or *sledge-hammer*, a large iron-headed hammer.

SLEEPERS, the undermost timbers of a gun or mortar-battery. See Platform

SLEETS, are the parts of a mortar going from the chamber to the trunnions, to strengthen that part.

SLING, a leathern strap which is attached to a musquet, and serves to hang it across the soldier's back as occasion may require.

Gun-Sling, or *Belt*. Although this useful article owes its invention to the ingenuity of an individual for the convenience of sportsmen, it may nevertheless be adapted with so much facility to military purposes, that a description of it cannot be thought superfluous.

The gun sling or belt is made in the following manner:—

The sling consists of three straps of leather, viz. one four feet six inches long, with the breadth agreeable to order. It is pointed and punched at one end, and has a buckle and loop at the other, which serve to shorten or lengthen it as the size of the person may require; another about twelve inches long, and three quarters of an inch wide, with a hook fixed at one end, the first being sewed ten inches from the pointed end of the belt. This strap being hooked up to either of the hooks in the main sling, forms a loop or bearing strap for the barrel of the musquet; and a third three quarters of an inch wide, and about six inches long, with an inch ring at one end, through which the belt is passed. This ring runs conveniently up and down the belt, and fully answers every purpose for which it was designed. A hook is sewed at the other end of this strap; the strap being lapped round the small part of the stock of the musquet, and the hook fastened to the ring, they together form a loop or bearing strap for the butt. By these means, in addition to the strap round the barrel as already mentioned, the musquet or rifle can be conveniently carried, on foot or horseback, without the assistance of either hand. The musquet being released from these restraints, and the hook fixed to the strap, with the ring, being hooked to a small eye that is fixed just before the guard, the whole is carried with very little assistance from either hand, and is instantly brought to a firing position The next position is by hooking the same hook to an eye that is fixed to the stock, about seven inches behind the guard; the barrel being at the same time supported by the strap, which is hooked to the main belt. The musquet is thus carried without the assistance of either hand; and if there be occasion to fire at a moment's notice, you have only to draw out the top hook.

Sling. A missive weapon made by a strap and two strings; the stone is lodged in the strap, and thrown by loosing one of the strings.

Sling likewise means a kind of hanging bandage, in which a wounded limb is sustained.

To Sling, to hang loosely by means of the strap belonging to a firelock.

Sling *your firelocks.* A word of command formerly used in the exercise of British grenadiers.

1st. Bring the sling with the left hand opposite to the right shoulder, and the firelock with the right hand opposite the left shoulder, by crossing both hands at the same time, bringing the left hand within the right, keeping the muzzle upright, the barrel to the left, and the right hand just under the left elbow.

2d. Bend the firelock back, and bring the sling over your head, placing it just above your right shoulder.

3d. Draw the sling with your left hand, and let go the firelock with the right at the same time, that it may hang by the sling on the right shoulder, the muzzle upwards, dropping both hands down by your sides at the same time.

Handle your Slings. 1st. Seize the sling with both hands at the same time, taking hold of it with the right hand about the middle, and as low as you can reach, without bending your body.

2d. With the left hand bring the butt forwards, slipping your left elbow under the firelock, by bringing it between the firelock and the sling; taking hold of the firelock at the same time with the left hand, letting the stock lie between the thumb and fore finger, the butt end pointing a little to the left with the barrel upwards.

3d. Bring the firelock to lie on the left shoulder, and the sling on the right, the barrel upwards, and the butt end pointing directly to the front, keeping the firelock to a true level.

SLOPE *Arms*, a word of command by which the musquet rests upon the shoulder with the butt advanced. In long marches soldiers are sometimes permitted to slope arms. In all other instances it is strictly forbidden.

SLOPING *Swords*, a position of the sword among cavalry, when the back of the blade rests on the hollow of the right shoulder, the hilt advanced.

SLOPS. See Necessaries.

SLOW *time*. See the time of slow marching.

SLUGS. Cylindric, or cubical pieces of metal, used as shot for guns.

SLUICE-*gate*, a water-gate, by which a place may be inundated, or the water excluded at pleasure.

SLUICES, in military architecture, are made for various purposes; such as to make rivers navigable; to join one river to another, which is higher or lower, by means of a canal; to form inundations upon particular occasions, or to drain spots of ground that are overflowed by high tides; they are also made in fortresses, to keep up the water in one part of the ditches, whilst the other is dry; and to raise an inundation about the place when there is any apprehension of being attacked.

Sluices are made different ways, according to the uses for which they are intended: when they serve for navigation, they are shut with two gates presenting an angle towards the stream; when they are made near the sea, two pair of gates are made, the one pair to keep the water out, and the other in, as occasion may require: in this case, the gates towards the sea present an angle that way, and the others the contrary way. The space inclosed by these gates is called *chamber*.

When *sluices* are made in the ditches of a fortress to keep up the water in some parts, instead of gates, shutters are made, so as to slide up and down in grooves; and when they are made to raise an inundation, they are then shut by means of square timbers let down into *cullises*, so as to lie close and firm. Particular care must be taken in the building of a *sluice*, to lay the foundation in the securest manner; that is, to lay the timber, grates, and floors, in such a form, that the weather cannot penetrate through any part, otherwise it will undermine the work, and blow it up, as it has sometimes happened: lastly, to make the gates of a proper strength in order to support the pressure of the water, and yet to use no more timber than what is necessary. Those who wish to be thoroughly acquainted with this kind of work, may meet with satisfaction in *L'Architecture Hydraulique, par M. Belidor*; or in Mr. Millar's *Practical Fortification*.

SMALL *arms*, musquets, fusils, carabines, pistols, &c.

SNAFFLE, a bridle without a curb bit.

SNICK *and* SNEE, a combat with knives, such as the Dutch carry.

SOBRIETY General temperance. In a military consideration, abstinence from an inordinate use of strong liquors. However frequent the deviations from this great and uncommon virtue may be found among soldiers, nothing can excuse or exculpate an officer who should so far forget himself, especially upon service, as to give the least countenance to such excesses, even by an occasional, much less by an habitual dereliction of this estimable quality. 'Sobriety keeps the head cool, strengthens the nerves, and renders moderate abilities equal to great exertions. Drunkenness, on the contrary, unfits the man for the common functions of life, and makes an officer not only contemptible to his soldiers, and dangerous to the cause he has engaged to fight for, but an indirect spur to the enterprise of an enemy, who will soon know how to take advantage of his vice and weakness.

SOC, *Fr.* A machine made of leather, which is fixed near the stirrup, to receive the end of the standard staff in cavalry regiments It is likewise called *braïer*, and is used by the persons who carry the colors either in infantry or cavalry regiments. In the former instance it is fixed to a leathern belt that comes over the shoulder or that is fixed to the waist.

SOCKET, generally means any hollow pipe that receives something inserted.

Socket *of a bayonet.* The round hollow part near the bent or heel of a bayonet, into which the muzzle of a firearm is received when the bayonet is fixed.

SODS, pieces of turf with which works are faced.

SOVAN, or *Savan*, Ind. The seventh month. It in some degree corresponds with July and August.

SOL, *Fr.* Soil; ground.

SOLAKS. Bowmen or archers belonging to the personal guard of the grand signor. They are always selected from the most expert bowmen that are among the janizaries. Their only arms are, the sabre, bow, and arrows.

SOLBATU, *Fr.* In farriery, surbated.

SOLDAN. This word is pronounced *Soudan.* It was formerly given to a general who commanded the califf's army. Saladin, a general under Naradin, king of Damas, having killed the califf Kaym, usurped the throne, and assumed the title in 1146; so that he became the first Soldan of Egypt.

SOLDAT, *Fr.* See **Soldier**.

Soldat *d'ordonnance à l'armée*, Fr. An orderly man.

SOLDATESQUE, *Fr.* A substantive of the collective feminine gender, which signifies private soldiers, viz.

La Bourgeoisie était exposée aux insultes de la soldatesque; the citizens were exposed to the insults of the soldiery. *La soldatesque s'est révoltée contre les officiers;* the soldiers revolted or mutinied against the officers.

Soldatesque is likewise used as an adjective, viz. *Des mœurs soldatesque;* the ways or manners of a private soldier. *Une dispute soldatesque;* a military broil or a dispute among private soldiers. We have an adjective which is derived from the same source, namely, soldier-like, but which is only taken in a good sense with us, as soldier-like conduct, soldier-

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and under the title of *soldiers of fortune* sought for employment in every country or state that would pay them.

Soldier's *Friend*. A term in the military service which is generally applied to such officers as pay the strictest attention to their men; granting them seasonable indulgences without injuring the service; seeing their wants relieved; and, above all things, having them punctually paid and regularly settled with. There is much confidence in the multitude when they are justly dealt by, and every soldier fights well under the guidance of a soldier's friend!

Soldier *Officer*. A term generally used among naval men to signify any officer belonging to the land service.

SOLDIERSHIP, (*Metier de soldat*, Fr.) The profession, character, and qualities of a military man.

SOLDIERY. Body of military men; soldiers collectively. Soldiers are properly the land forces of a nation or state. It is in the power of the legislature to fix the establishment according to the exigency of the times.

SOLDURIERS, *Fr.* A term anciently used among the French, to signify those persons who attached themselves to some particular general or military knight, whose fortunes they followed, in consequence of being paid and supported by him.

SOLEIL, *Fr.* Sun.

Soleil *fixe*, Fr. An artificial fire-work, so disposed, that when it takes fire, it emits a brilliant light from a fixed centre, and resembles the sun at mid day.

Soleil *tournant et courant sur une corde*, Fr. An artificial fire-work made in the shape of the sun, which is so contrived, that it moves in full illumination, either backward or forward, along a rope.

SOLEIL, *montant*, Fr. An artificial fire-work, so called from its ascending in full illumination, and scattering fire in various directions by a desultory movement. It is likewise called *tourbillon de feu*; a whirlwind of fire.

SOLEIL *tournant et girandole*, Fr. An artificial fire-work, which, when set fire to, resembles a sun moving round its axis, and exhibiting the figure of a girandole.

SOLID, (*Solide*, Fr.) that body which has all the geometrical dimensions.

Solid *Bastion*. See Fortification.

SOLIDAIRE, *Fr.* Consolidated.—An old French legal term, but now generally used to signify a concentration of good qualities, &c. Thus the French convention declared—*Que les armées étoient solidaires de gloire*; that the armies had consolidated their glory; meaning thereby, that the victories of one part of the army had been added to the account of the rest.

SOLIDITY, (*Solodite*, Fr.) Firmness; density; compactness.

SOLIVE, *Fr.* A joist

Solive likewise signifies a measure in carpentry. It is supposed to be equal to three cubic feet. So that the solive in France is to the measure of wood-work, what the cubic toise is to the measure of earth, or brick-work. The solive is divided into six French feet which are called *pieds de solive*. The foot into 12 inches, called *pouces de solive*; and the inch into 12 lines, which are called *lignes de solive* In order to form a correct idea of the solive, with regard to all parts or proportions, it must be considered as a parallelipipede, whose base is a rectangle containing 12 inches in breadth, to six in height, and a toise in length, the solive being equal to 3 cubic feet.

SOLIVEAU, *Fr.* A small joist; a rafter.

SOLSTICE, (*Solstice*, Fr.) The point beyond which the sun does not go; the tropical point, the point at which the day is longest in summer, or shortest in winter. It is taken of itself commonly for the summer solstice.

The Summer Solstice, (*le Solstice d'ete*, Fr.) Is when the sun is in the tropic of cancer, and gives us the longest day.

The Winter Solstice, is when the sun is in the tropic of capricorn, and gives us the shortest day. There is not any solstice under the equator, there being, in that quarter, without variation, equal day and equal night.

SOLUTION, (*Solution*, Fr.) Resolution of a doubt; removal of any intellectual difficulty.

SOMACHE, *Fr.* Brackish, salt. The mixture of sea and river water is so called, as *eau somache*.

SOME-*war*, *Ind.* Monday.

SOMMERS, in an *ammunition waggon*, are the upper sides, supported by the staves entered into them with one of their ends, and the other into the side pieces.

SOMMIER *d'un Pont levis*, Fr. See Seuil de Pont levis.

SONAILLER, *Fr.* A term used among the drivers of mules, to signify the leading animal that has a bell tied to his neck, which they call *sonaille*.

SONDE, *Fr.* Sounding lead, probe, any instrument used to ascertain the nature of soil, &c.

SONDER, *Fr.* To sound, to throw out the lead.

SONNANT, *Fr.* A participle which is frequently used by the French, to express a specific period of time, or the nature of any thing.

A five heures SONNANTES, *Fr.* At five o'clock precisely, or as the clock strikes five.

Argent Sonnant, *Fr.* Hard cash. This term was in familiar use at the commencement of the French revolution, when it was found expedient to pay a select body of troops, called the *gendarmes*, in ready money, whilst the aggregate of the nation took paper currency or assignats

SOODER, *Ind.* The fourth or lowest

of the original tribes of Hindoos, as they come from the feet of Brama, which signifies subjection. They are obliged to labour, and to serve when called upon.

SOOKRBAR, *Ind.* Friday.

SOORETHAUL, *Ind.* Statement of a case

SORDET, } The small pipe or
SORDINE, } mouth piece of a trumpet.

SORN, a servile tenure in Scotland, by which a chieftain might, with his followers, live upon his tenants at free quarters.

SORTIES, in a *siege*, parties that sally out of a town secretly to annoy the besiegers, and retard their operations.

SOUDOYES, *Fr.* From *Soudoyer.* To keep in pay. This name was originally given to a body of men who inlisted themselves under Philip Augustus of France, on condition that they should receive a certain daily pay in the way of subsistence. Froissart calls all soldiers, who are paid for doing duty, or for going to war, *soudoyes.*

SOUFLE, *Fr.* The wind of a cannon.

SOUFLER *les canons*, Fr. To scale pieces of ordnance. This is done by means of a moderate charge of gunpowder, for the purpose of cleaning them.

SOUFLURE, *Fr.* A cavity or hole, which is frequently occasioned when pieces of metal have been forged in too intense a fire. Cannon balls lose their required weight by flaws of this sort.

SOUFRE, *Fr.* See SULPHUR

SOUGARDE, *Fr.* Guard, throat-band of a gun. A semi-circular piece of brass which is fixed beneath the trigger of a musquet, to prevent it from going off by accident.

SOUGARDES. See DECHARGEURS.

SOUGORGE, *Fr.* Throat-band of a bridle.

SOUKARS, *Ind.* A general name for bankers

SOULEVEMENT, *Fr.* Insurrection, revolt.

SOULEVER, *Fr.* To stir up, to excite to insurrection.

Se SOULEVER, *Fr.* To rise, to revolt, to mutiny; *l'armee s'est soulevee contre son general;* the army rose, or mutinied against its general.

SOUMETTRE, *Fr.* (As an active verb) to subdue, to overcome, to reduce to subjection.

Se SOUMETTRE, *Fr.* To submit oneself. To yield.

SOUMISSION, *Fr.* Submission.

SOUMIS, *ise*, Fr. In fortification; to lie under, to be commanded. Thus one work is said to be commanded, *ou être soumis*, when it is lower than another. The same signification holds good with respect to heights or elevations.

SOUND. Any thing audible; noise; that which is perceived by the ear. The experiments are numerous by which it has been found, that sound is audible to

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9. *Officers*
10. *Serjea*
11. *Trump*
12. *Orders.*
13. *Dinner*
ficers.

14. *Watering call.* To turn out in watering order.

15. *Setting the watch.*

These duty soundings, according to situation, are given by one trumpet, or by the whole of the quarter, regiment, or camp.

For exercise.

16. *March.* The squadron, regiment, or line being halted, the trumpet of the commander will accompany the word, *the — will advance;* and at the word *march*, the whole will move at a walk.

17. *Trot.*
18. *Gallop.*
19. *Charge.*

When the body is marching at a walk, on the signal to trot, the whole instantly receive the word *trot*, and change pace immediately. The same is to be observed from the trot to the light *gallop*, and from the gallop to the *charge*. During the charge itself, the trumpets of all the squadrons that are charging, may sound.

20. *Halt.* The whole halt on the word of command. After the halt of a retreating body, the proper command will bring it to its proper front.

21. *Retreat.* The signal of *retreat*, (which will be often preceded by that of halt) is a general caution for the several words of execution to be given.

22. *Rally.* The signal to *rally*, may be continued as long as it is necessary, and be repeated by the trumpets of such parts of the body, as are concerned in the operation, till the end is answered.

These signals are given by the chief commander only of the whole body that is exercised, whether of a squadron, regiment, brigade, or a line: they are not repeated by other commanders; they are addressed as cautions to the commanding officers of the parts of such body, not to the men; nor is any movement, or alteration of movement, to take place, but in consequence of the words, march, trot, gallop, &c. &c. rapidly and loudly repeated, the instant the trumpet caution is given.

The signals of movement are so short, that the words of execution may nearly coincide with them.

These signals for quick movement, may in regular exercise be given by a person who at the instant of giving them is stationary; but if he leads the body in motion, it is evident that in the gallop, the charge, and the halt, the voice and the eye, can only determine, and regulate.

23 *Turn out skirmishers.* This signal is made by the commander of the whole, if the whole is concerned, otherwise by the commander of such part only as is to execute; if one, or two squadrons only, the voice will suffice. It may be a signal for pursuers after a charge.

24. *Call in skirmishers.* This signal is made by the commander of the whole, and repeated by the commander of the detachments; is for the skirmishers to join their detachments; or it may originally come from the commander of the detachments. On the signal to rally, the whole join the bodies they were detached from.

25. *Skirmishers cease firing.* This signal is made by the commander of the whole, and repeated (or originally made) by the commander of the supporting detachments, from which the skirmishers are advanced.

Bugle Horn SOUNDINGS, are different calls which are made by the bugle horn for duty and exercise. The following constitute the principal ones. See *Am. Mil. Lib.*

1st. *For duty.*

1. *Reveillé.*
2. *Rouse, or turn out.*
3. *Dinner call.*
4. *Setting the watch.*

These soundings are different in their notes from those of the trumpet, but may be used under the same circumstances.

2d. *For exercise.*

5. *March.*
6. *Trot.*
7. *Gallop.*
8. *Charge.*
9. *Halt.*
10. *Retreat.*
11. *Rally.*
12. *Turn out skirmishers.*
13. *Skirmishers cease firing.*
14. *Call in skirmishers.*

These soundings exactly the same as those of the trumpet, in the place of which the bugle horn may be occasionally substituted.

These signals, of the trumpet, and bugle horn, are meant in aid of the voice, but are by no means to be substituted for, or prevent the ordered words of execution.

The trumpet is always to be considered as the principal military instrument for these soundings, and particularly belongs to the line; the bugle horn to riflemen and detached parties.

SOUPAPE, *Fr.* Sucker of a pump.

SOURA, *Ind.* A division; as that of chapter.

SOURD, *e. Fr.* Literally means deaf, dull. It is variously applied by the French—viz.

Lanterne Sourde, Fr. A dark lantern.

Lime Sourde, Fr. A file which is made in such a manner, that you may separate pieces of iron without making any noise in the operation. It is likewise used in a figurative sense—to signify a person who says little, but is always meditating something mischievous or injurious to others.

The French likewise say, *sourdes pratiques, pratiques sourdes;* secret or underhand practices; *sourdes menees, menees sourdes*, secret or underhand ways. These terms are always used in a bad sense. In mathematics, the French call those quantities, *quantites sourdes*, which are incommensurable, that is, which cannot be exactly expressed, either by whole numbers or by fractions. Thus the square root, or *racine carree*, of two is a *quantite sourde*.

SOURDINE, *Fr.* A little pipe, a mute. It likewise means a small spring, which is fixed in a dumb repeater. The French make use of this word in a figurative sense, to signify, literally, without noise. *Les ennemis ont deloge à la sourdine*, the enemy decamped privately, and without noise.

SOURIS, *Fr.* Literally a mouse. For its application in fortification, see PAS DE SOURIS. It is likewise used to express a want of expedients or resources in critical moments, and the consequent danger of being caught in the snare one is endeavoring to avoid—*La souris qui n'a qu'un trou est bientôt prise*, the mouse that has only one hole to run to, is soon caught.

SOUS, *Fr.* A proposition which is used to denote the state or condition of one thing with respect to another which is above it, viz.

SOUS-*tangente*, Fr. Sub-tangent.

SOUS-*lieutenant*, Fr. Sub-lieutenant.

SOUSIGNER, *Fr.* To undersign.

SOUSIGNE, *ée*, Fr. The undersigned.

La SOUTE, *Fr.* The powder or bread room.

SOUTENIR, *Fr.* In exercise and evolution to turn upon the left foot in proportion as any given line bears towards the fixed point upon which it is directed to rest. The point on which the soldier turns is called the pivot, *Le pivot.*

SOUTENIR, *Fr.* To maintain; as *soutenir le combat*, to maintain the fight.

SOUTENIR *le feu de l'ennemi*, Fr. To stand the enemy's fire.

SOUTENIR *le siege*, Fr. To hold out in a besieged place.

SOUTERRAINS, *Fr.* Subterraneous passages, lodgments, &c. that are bomb-proof.

SOUVERAIN, *Fr.* Sovereign. The person in whom sovereignty is vested.

SOUVERAINETE. Sovereignty; supremacy; highest place; supreme power.

SOW, in ancient military history, a kind of covered shed, fixed on wheels, under which the besiegers filled up and passed the ditch, sapped or mined the wall, and sometimes worked a kind of ram. It had its name from its being used for rooting up the earth like a swine, or because the soldiers therein were like pigs under a sow.

SOWAR, *Ind.* A horseman.

SOWARRY, *Ind.* A retinue, cavalcade; the English residents in India say, such a man travels with a large *sowarry*, meaning a great number of followers.

SOWGUND, *Ind.* An oath.

SPADE, (*Beche*, Fr.) an instrument for digging. See INTRENCHING TOOLS, MINING, &c.

SPADROON, a sword much lighter than a broadsword, and made both to cut and thrust.

SPADROON *Guard*, a guard sometimes used with the cut and thrust sword, and also with the broadsword. It consists in dropping the point towards the right from the outside guard, till it comes under your adversary's blade, the edge being upwards, and your wrist at the same time raised.

SPAHI, *Persian.* A soldier or military man, whence the common Hindustan term SEPAHI, corrupted by the English into *Sepoy*

SPAHI. An upper garment made of blue cloth, which is worn by the Janizaries, in the same manner that we wear a loose great coat or surtout.

SPAHIS. A corps of Turkish cavalry, which is kept in pay by the grand signor. The Spahis do not possess any lands as the Zaims and Timariots are allowed to do. This corps is composed of twelve or fifteen thousand men, and consists of the *Silbataris*, whose standard or cornet is yellow, and of the *Spahis-Glanis*, who have a red one. When the troops were first formed, the latter acted as servants or batmen to the former: they became a separate class or troop in consequence of their superior conduct on service, and were distinguished in this manner:—They are armed with a sabre and a lance, which they call *Misra*. They likewise make use of a long dart or javelin, called a *Gerie*, with an iron ferrel at one end, which they throw at the enemy with surprising skill; and if they should happen to miss their aim, they can instantly bend from their saddles, and catch it up, whilst the horse is on full gallop. Others again are armed with bows and arrows, and some have pistols and carbines. When the grand signor takes the field in person, he generally makes a present of five thousand aspres to each *Spahi*. This bounty is called *Sadach akchiasi*, or gift to enable each man to purchase bows and arrows.

When the *Spahis* take the field, they march in rear of their standard; but they do not observe any particular order of route. They divide themselves, on the contrary, into small bodies, and advance in the most desultory manner.

Besides these two troops of *Spahis*, there are four others in the Turkish service, which are only called upon under circumstances of extreme pressure and emergency. The first is called *Sag-Vlesigi*; the standard is red and white. The second is named *Sol-Vlesigi*; the standard is white and yellow. The third is styled *Sag-Gureba*, the standard is green: and the fourth, *Sol-Gureba*; the standard is white. All these *Spahis* receive a daily pay of twelve to twenty aspres; and they are subject to every species of duty. Those are *Spahis*, called *Timars*, or *Timariots*. See TIMARIOTS.

SPANNER, the lock of a fusil or carabine.

SPATTERDASHES, a kind of covering for the legs of soldiers, made of cloth, or coarse linen waxed over, and buttoned tight: by which the wet is kept off, now called long gaiters.

SPATTS, a small sort of spatterdashes, that reach only a little above the ancle, called also half gaiters

SPEAKING *Trumpet*, a trumpet by which the voice may be carried to a great distance. It was formerly used in large armies; and even so late as the siege of Gibraltar, when general Elliot, (afterwards Lord Heathfield) caused the brigade words of command to be given by means of this instrument.

SPEAR, a *lance*, or long weapon with a sharp point, formerly used as a manual, or missive weapon. See Lance.

To SPEND. This term is used at sea of a mast of a ship; when it is broken down by foul weather, it is said to be spent. It is sometimes used in military matters to express the consumption of any thing: as to spend all your ammunition.

SPENT *Ball*, (*Boulet mort*, *Balle morte*, Fr.) A cannon or musquet ball, &c. is said to be spent, when it reaches an object without sufficient force to pass through it, or otherwise wound, than by a contusion. Spent balls, however, are frequently fatal in their effects, especially when they hit any of the noble parts. It is on occasions of this sort, that the activity and skill of a field or ambulating surgeon, are indispensibly necessary; for which reason a sufficient number of these useful attendants upon an army, ought always to accompany the different battalions that go into action. The French pay the strictest attention to this branch of the service. Their flying hospitals are not only well supplied with all the requisites for so important an establishment, but every dependent part is equally well provided.

SPHERE, SPHERICAL, a round body of which the centre is at the same distance from every point of the circumference; as is the case with *Shots*, *Shells*, &c.

SPHERES *d'artifice*, Fr. Iron hoops with matches, steeped in combustible matter, fixed round them. When there is only one hoop it is called *Circle d'artifice*; when there are two or three, one within the other, the assemblage of them is called *sphere d'artifice*, from its resemblance to that figure.

SPHERICAL. Round.

SPHEROID, an oblong body, approaching the form of a sphere.

SPIES, SPIALS, in *war*, are persons employed to give intelligence of what the enemy is doing. They should be well paid: who pays them ill, is never well served. They should never be known to any but the general who employs them, nor should they know one another. When they propose any thing very material, their persons, or their wives and children, should be secured and kept as hostages for their fidelity. If they are apprehended, they immediately suffer death.

Spies are found in the cabinets of princes, in the closets of ministers, amongst the officers of an army, and in the councils of generals; in towns belonging to the enemy, and in monasteries. The greatest generals strongly recommend them, whatever expence they may occasion; and indeed a commander had better be in want of many particulars, however necessary, than be destitute of spies. Nothing should be spared to procure them; and even the promises made to them should be observed with the most inviolable integrity. By making a proper use of these necessary creatures, the most secret designs of an enemy may be discovered, the positions his armies are to take, the stations of his fleets, and even the manner in which the former is to be secured by masked batteries, or the latter be kept firm with chain moorings; as was the case off Boulogne in 1800.

To SPIKE *a gun*. This term is chiefly used at sea, and signifies to fasten a quoin with spikes to the deck, close to the breech of the carriages of the great guns, so that they may keep firm and close to the sides of the ship, and not break loose when the ship rolls. It is likewise used in military matters to signify the choaking up the touch-hole of a piece of ordnance, so as to render it useless. See To Nail.

SPIKES, in *gunnery*. See Hand-Spikes.

SPIN, or *to spin hay*, is to twist it up in ropes, very hard, for an expedition; by which means it is less bulky, and less troublesome for the cavalry to carry behind them. An expert horseman can spin five days forage into a very narrow compass.

SPIRAL, (*Spirale*, Fr.) In architecture, a curve that ascends winding about a cone or spire, so that all the points thereof continually approach the axis.

Spiral *Line*, (*Ligne spirale*, Fr.) A curve line, which makes a circular movement like a screw, perpetually diverging or going off from its centre.

SPIRAL, SPIRE, a line drawn progressively round the same axis, with a distance between each circle; as the thread of a screw. See Screw.

SPOKES, the bars of a wheel that pass from the nave to the felly.

SPONTOON, is a spear formerly used instead of a half-pike, by officers of infantry; when the spontoon was planted, the regiment halted; when pointed forwards, the regiment marched; and when pointed backwards, the regiment retreated.

To SPRAWL, to widen out in an irregular and unsoldier-like manner. This term is chiefly applicable to the cavalry.

SPRAWLING. Loose, unconnected, wide of each other.

A sprawling *charge*, a loose and irregular movement of cavalry, instead of a close, compact, forward attack.

To SPRING To give vent to any combustible matter upon which gunpowder principally acts by the power of explosion. Hence to spring globes of compression, &c. The latter are frequently used for the same purposes that sky-rockets, &c. are, viz. to serve as signals when any sudden attack is to be made.

Spring, in a general acceptation, an elastic body; a body which when bent, or distorted, has the power of restoring itself to its former state. It is in general a piece of tempered metal, which by means of its elastic force, is useful in severa machines to give them motion. In a gun lock the springs are distinguished by various appellations according to their several uses, viz.

Cear and Cear Spring. The cear is a piece of hardened iron or steel in a gun lock, which moves on a pivot, and the point of which is received in a notch cut in the tumbler, and the other end is acted upon by the trigger.

The cear spring is a small spring, which throws the cear into the notch cut in the tumbler of a gun-cock, when the piece is at half cock or full cock.

Feather Spring The spring of a gun lock beneath the foot of the hammer; called likewise hammer-spring.

Main Spring. The spring in a gun lock which operates on the tumbler, and gives force to the cock.

To Spring, in a military sense, to step forward with a certain degree of elasticity.

Spring *up*. A word of command, which has been occasionally used when sections double up. It signifies, indeed, the same as double up, and is sometimes used singly, as *Spring!* particularly to light infantry men.

To Spring *the firelock*. To bring it briskly up to any ordered position; to the recover, for instance.

SPUNGE, (*ecouvillon*, *arroussement*, *griffon*, Fr.) A long staff with a roll at one end, covered with a sheep's skin, of the bigness of the bore of a gun, to scour it after firing; and to prevent any sparks from remaining. It is sometimes called Merkin, from its artificial texture of hair at the end of the staff.

Pyrotechnical Spunges Spunges which constitute the black match or tinder that is brought from Germany, for striking fire with a flint and steel. These spunges are made of the large mushroom, or fungous excrescences which grow upon old oaks, ash trees, firs, &c. These are steeped in water, boiled and beaten, and then put in a strong lye made of saltpetre, and afterwards dried in an oven.

To Spunge *the gun*, (*écouvillonner le canon*, Fr.) To cool and cleanse the bore of a piece of ordnance by means of a wet spunge which is fixed to the end of a long pole.

SPURS, in *old fortifications*, are walls that cross a part of the rampart, and join to the town wall.

Spurs, instruments fixed to the heels of horsemen, with which they can at pleasure, goad the horse to action.

SQUAD. A diminutive of squadron. It is used in military matters to express any small number of men, horse or foot, that are collected together for the purposes of drill, &c.

To Squad. To divide a troop or company into certain parts, in order to drill the men separately, or in small bodies, or to put them under the direction and care of some steady corporal, or lance corporal. In every well regulated troop or company, the men are squaded in such a manner, that the most minute concern with respect to the interior economy can be instantly accounted for. The following distinct instructions have appeared in print. We quote them the more readily because they not only coincide with our own ideas on the subject, but seem perfectly calculated to preserve good order and discipline. They relate chiefly to the cavalry, but are equally applicable to infantry corps.

Each troop, it is observed, ought to be divided into two squads when under forty. Into three or four when above, according to the number, with an equal proportion of non-commissioned officers in each; and when the eldest is on duty, the charge of the squad falls on the next in the squad, and so on. First the stables must be divided as equally as possible into these divisions, and the men must belong to the same squad that their horses do: so that the foot and horse billets, and those for the married men's rooms of a squad, go together. The squads must be as distinct and separate as possible; in short as much so as two troops are, never crossing each other. The stables must likewise be squadded entire; that is, no one stable should be allotted to two separate squads; for which reason, the proportion of numbers in each squad cannot always be exactly equal. The squad is entirely in charge of its own serjeant, or, in his absence, of the corporal who commands it, with relation to every quarter and stable duty, parades on foot and horseback. The quarter-master, in the cavalry, has, of course, the general inspection of the whole.

When a corporal has charge of a squad, he must not look after his own horse at such times as interfere with his squad duty: he can generally manage to do it at the morning stable, and in the evening he can get him done before the regular hour. On a march, or after a field day, he cannot do it so conveniently, and of course orders another man to do it. When a detachment of an absent troop is in a quarter, it must be attached to a particular troop, whichever may be judged most convenient. It must be considered as a separate and distinct squad, quartered by itself, (as far as it can be, consistent with the proper quartering of its recruits) and under the command of its own non-commissioned officer, unless the troop to which it belongs cannot spare a non-commissioned officer with it; in which case it must be given in charge to a non-commissioned officer of the troop to which it is attached.

The same rules for squadding hold good on a march, and in all situations whatever; and the list of quarters must be made out accordingly.

The non-commissioned officers must always be kept to the same squad, as nearly as they can be. The policy of this instruction is obvious, as they will thereby be made acquainted with the character of every man in the squad.

Recruits should always be quartered and squadded with old soldiers who are known to be steady and well behaved; and those men that are at all irregular in their conduct, must be separated and distributed in squads which are composed of good old soldiers.

Awkward SQUAD. The awkward squad consists not only of recruits at drill, but of formed soldiers that are ordered to exercise with them, in consequence of some irregularity under arms.

SQUADRON. A body of cavalry, composed of two troops. The number is not fixed, but is generally from 100 to 250 men.

SQUARE, (*Carré*, Fr.) A figure with right angles, and equal sides.

The SQUARE A particular formation into which troops are thrown on critical occasions; particularly to resist the charge of cavalry.

Solid SQUARE, is a body of foot, where both ranks and files are equal.—It was formerly held in great esteem; but when the prince of Nassau introduced the hollow square, this was soon neglected.

Hollow SQUARE, is a body of foot drawn up, with an empty space in the centre, for the colors, drums, and baggage, facing every way to resist the charge of the horse.

Oblong SQUARE. A square which is not at right angles, but represents the figure of an oblong, whose sides are unequal. Thus, as eight companies of equal numbers would form a perfect square, ten make an oblong.

Perfect SQUARE. A square whose sides are equal and at right angles.

The perfect square, in the formation of troops, seems best calculated for military movements and arrangements. Battalions, for instance, which are composed of eight companies, with one hundred rank and file in each, are equal to every species of disposition. It is upon this principle, we presume, that the French have distributed their infantry. British regiments, on the contrary, consist of eight companies, one of which is grenadiers and the other of light infantry, and are so composed that no square of this kind can be formed. This is manifestly a defect in their system. It is, indeed, remedied by the grenadier and light infantry companies being occasionally detached, or cast into separate battalions; so that the remaining companies, by being told off, may by brought to eight equal parts. Tacticians will perhaps agree with us, that it would be better to have every regiment composed of ten companies, flanked by a subdivision of grenadiers, the whole being so equalized as to produce four equal sides. In this case, the light companies should be formed into separate bodies of chasseurs or riflemen, after the manner of the French.

Shakspeare uses the word square to signify squadrons; but it is now obsolete.

SQUARE *root*. In geometry, the square root of any number is that which multiplied by itself, produces the square; thus 4 is the square root of 16

SQUARE *number*. In arithmetic, is when another number, called its root, can be found, which multiplied by itself produces the square; thus 16 is the square number of 4, and 9 the square of 3.

SQUELETTE, *Fr.* literally means a skeleton. It is used by the French, as by us, to signify the remnant, or incomplete state of a regiment, viz. *La squelette d'un regiment;* The skeleton of a regiment.

SQUELETTE, *Fr.* likewise means the skeleton state of a ship, or a ship upon the stocks, and which has only her ribs and first timbers laid in. So that *squelette* among the French will apply either to the first organization or arrangement of parts belonging to a work or establishment, before it is completed, or to the remnant of such a work or establishment, after it has been completed. In the first sense of the word *cadre*, frame, outline, &c. bears the construction of *squelette* among the French, as, *cadre d'un corps*, When the British expedition to Quiberon was planned, there were several cadres of this description. They consisted of French noblemen and gentlemen who were to organize the Chouans, and receive appointments according to their several ranks, &c. &c.

SQUIRE. An attendant on a warrior was formerly so called. See ARMIGER.

STABLE *horse*, Ind. That part of the late Tippoo Sultaun's cavalry, which was best armed, accoutred, and most regularly disciplined.

STADIUM, (*Stadion*, Fr.) An ancient Greek long measure, containing 125 geometrical paces, or 625 Roman feet, corresponding to our furlong. This word is formed from the Greek term, which signifies station. It is said that Hercules after running that distance at one breath, stood still. The Greeks measured all their distances by stadia. The Romans had, likewise, their stadia, derived from the Greek, by which they measured distances. The stadium of Rome contained [illegible] geometrical paces. Eight stadia make one Italian mile.

STADION, among the Greeks signified also a space of enclosed or open ground, containing that measure, where the public races were run.

STAFF, in military affairs, consists of a quarter-master general, adjutant-general, majors of brigade, aids-de-camp, &c. The general staff properly exists only in time of war See QUARTER-MASTER GENERAL, &c.

Regimental STAFF, are, the adjutant, quarter-master, chaplain, and surgeon, &c.

STAFF *of command*. See BATTOON.

The STAFF, on British home service, consists in general of

One general commanding a district.
One lieutenant-general.
One major-general.
One adjutant-general.
One quarter-master general.
One deputy adjutant, and quarter-master general.
One engineer.
One assistant adjutant, and quarter-master general.
The regulated number of aids-de-camp and brigade majors:
One commissary general.
Deputy commissaries general, assistant commissaries general, according to circumstances.
One inspector general of hospitals.
Physicians, surgeon and apothecary, mates.

The British staff in India consists of a general staff, station staff, cantonment, and garrison staff; and an hospital staff. The staff in Great Britain is comprehended under general staff, garrison staff, district staff, and staff belonging to the cavalry depot at Maidstone, and the general infantry one in the Isle of Wight. There is likewise an hospital staff. For an account of staffs in general see *Am. Mil. Lib.*

The *staff* of the French has been the main spring of their tactics, and no army can be effective without a good staff.

STAFF, the same as *baton*; from whence those officers in the suite of generals, and not attached to regiments, are called *the staff*, a baton being formerly the insignia of office; which is now supplied by other devices, as facings, feathers, and so forth.

Hammer STALL. A piece of leather, which is made to cover the upper part of the lock belonging to a musquet. It is useful in wet weather.

STAMP *duties*. Imposts laid upon paper in England, that is used for legal or commercial purposes. Proceedings of courts-martial, whether copies or originals, are not chargeable with stamp-duties; nor are the receipts given by officers for their respective pay or allowances.

STAND. The act of opposing; thus troops that do not yield or give way are said to make *a stand*.

To STAND *the enemy's fire*; to remain with steady firmness in orderly array, without being discomposed by the shot, &c. of an opposing enemy.

To STAND. To have an erect position. Every recruit should be taught to hold his body in such a manner, that he feels himself firm and steady upon whatever ground he may be placed for the purposes of exercise or parade. See POSITION WITHOUT ARMS.

To STAND *well under arms*. To be so perfectly master of the firelock as not to be embarrassed, or to be rendered unsteady by its weight, but to be able to preserve a correct relative position of the body through all the changes of the manual and platoon, &c. and during the prescribed movements in parade and field exercises. See POSITION WITH ARMS.

To STAND *at ease*. To be allowed a certain indulgence with regard to bodily position, with or without arms. See EASE. It is likewise a word of command, as *Stand at—Ease*.

STAND *fast*. This term is frequently used as a caution to some particular part of a line or column. In the first of the nineteen manœuvres, for instance, the grenadiers are directed to *stand fast*, while the remaining companies march from their alignement to form close column behind them. When a battalion, drawn up in line, is to move forward in front of its original position from the right, left, or centre, the named division, subdivision, or section, *stands fast*, and the remaining ones, which have been wheeled backward into column, march towards the inward flank of the standing division, subdivision, or section. On the first of the moving bodies arriving at the inward pivot of the standing one, the latter receives the word march, and the former wheels into the ground. The rest successively do the same. By this method the leading division is spared the trouble of wheeling back and returning again to its original ground.

STANDARD, that which is the test or criterion of other things.

STANDARD. A measure by which men enlisted into the British service have the regulated height ascertained.

According to the British regulations and orders published in 1799, the standard for men raised for the heavy cavalry shall be five feet seven inches, and for the light cavalry and infantry five feet five inches; but no recruits are to be taken, even of those sizes, who exceed 35 years of age, or who are not stout and well made.—Lads between 16 and 18 years of age, who are well limbed, and likely to grow, may be taken as low as five feet six inches for the heavy cavalry, and as low as five feet four inches for the light cavalry and infantry. In those regiments which ar specially authorised to enlist boys, healt lads, under 16 years of age, who are likely to grow, may be taken as low as five feet one inch. It will be recollected, that this standard is for men inlisted during a war; when regiments are put upon the peace establishment a higher standard is resorted to. Thus by a letter dated 28th January, 1802, it is directed, that the standard for the infantry of the line shall be five feet seven inches; that no man shall be inlisted who is above 25 years of age; but growing lads from 17 to 19 years of age, shall be taken as low as five feet five inches.

STANDARD, in *war*, a sort of banner or flag, borne as a signal for the joining together of the several troops belonging to the same body.

The standard is usually a piece of silk 1 1-2 feet square, on which is embroidered arms, device, or cypher, of the country. It is fixed on a lance eight or nine feet long, and carried in the centre of the first rank of a squadron of horse, by the coronet.

Standards *belonging to the cavalry*. Standards are posted in the following manner:

The first with the right squadron.

The second with the left; and the third with the centre.

In advancing to the front on foot, the advanced standards and their serjeants must not slacken their pace, or deviate from right to left, as the lieutenant-colonel or leading officer may happen to do, but if he be in their way, they must call to him, because they alone regulate the march.

The standards must always be brought to the parade by a troop, viz. by that which has its private parade nearest to head-quarters. They must be accompanied by as many trumpeters as can conveniently assemble with that troop.—Swords must be drawn, and the march sounded. The cornets parade, of course, with that troop to receive the standards. The standards are received by the regiment or squadron at open ranks, with swords drawn, officers saluting, and the march sounding by the remaining trumpets. They must march off from head-quarters, and be lodged with the same form.

STANDARD *bearer*, he who carries the standard; a cornet, ensign, &c.

Standard-*Hill*, a hill in England so called because William the conqueror set up his standard on it, before he joined battle with Harold.

STANDING. Settled, established, not temporary.

Standing *army*. An army which is quartered upon a country, and is liable to every species of duty, without any limitation being fixed to its service. The life and foot guards form a part of the standing army of Great Britain The militia, but not the volunteers, may be partly considered as such: the adjutant, non-commissioned officers, and drummers being in constant pay, and a third of the quota of men, together with all the officers, being called out once a year to be exercised for 28 days.

Standing. Rank; condition. It likewise signifies length of time. As, such an officer is of very old standing in the army.

STAPLES, are loops of iron, or bars pointed and bent so as to be driven in at both ends.

STAR-*chamber*. A chamber in Westminster so called from its roof being painted with gilt stars. It has been rendered proverbially odious to the English nation, on account of the encroachments which were made upon the constitution of the country during the reign of Charles the first.

STAR-*fort*, in *fortification*. See Fort and Fortification.

STATE. Condition of any thing; as a weekly state of a regiment, &c.

State *of a detachment*. The difference between the state of a corps or detachment, and a mere return of the same, consists in this, that the former comprehends the specific casualties, &c. that have occurred; whereas the latter gives an abstract account of the officers and men in a more general and comprehensive manner. The word *state* is likewise used to express the condition of every thing belonging to the equipment of a regiment; as, state of arms, accoutrements, &c.

STATICS, (*Statique*, Fr.) A branch of mathematics, which considers weight or gravity, and the motion of bodies arising therefrom. Those who define mechanics to be the science of motion makes statics a member thereof, viz. That part which considers the motions of bodies arising from gravity. Others again say, that statics should be the doctrine or theory of motion, and mechanics the application thereof to machines.

STATION, in geometry, a place pitched upon to make an observation, take an angle, or the like.

STATION. See Post.

STATIQUE, *Fr.* See Statics.

STATISTICS. According to the author of a late work, statistics are that comprehensive part of municipal philosophy, which states and defines the situation, strength, and resources of a nation. They constitute a kind of political abstract, by which the statesman may be enabled to calculate his finances, as well as guide the economy of his government; and they are equally useful in ascertaining the military resources of a country.

STAVES, round and flat, used in ammunition and other waggons or carts, are round and flat sticks between the sommers and side-pieces, also in common and scaling ladders.

STAYS, in truck carriages, are the

irons which are fixed one end under the fore axle-tree, and the other to the side-pieces, in the form of an S.

STEED. A horse either for state or war.

STEEL, particularly applied, it means *weapon* or *armor*.

STEGANOGRAPHY, the art of secret writing, or of writing in cyphers, known only to persons corresponding, and much used in war.

STENOGRAPHY, (*Sténographie*, Fr.) See STEREOGRAPHY.

STEP, (*Pas*, Fr.) Progression by one removal of the foot. It likewise signifies pace.

To STEP. To move forward or backward, by a single change of the place of the foot.

To STEP *out*. To lengthen your pace.

To STEP *short*, is to diminish or slacken your pace. On the word, *step short*, the foot advancing will finish its pace, and afterwards each man will step as far as the ball of his toe, and no further, until the word *forward* be given, when the usual pace of 24 inches is to be taken. This step is useful when a momentary retardment of either a battalion in line, or of a division in column, shall be required. See *Am. Mil. Lib.*

To STEP *out*, is to lengthen the step to 30 inches, by leaning forward a little, but without altering the cadence. It is also called the *charging step*, or *accelerated pace*. This step is necessary when a temporary exertion in line and to the front, is required; and is applied both to ordinary and quick time.

These phrases are frequently used in military movements, when it is found necessary to gain ground in front, or to give the rear of a column &c. time to acquire its proper distance. The officer who leads a head division should be particularly attentive, when he is ordered to step out or step short, especially in the different wheelings, not to lose the precise moment when either may be thought expedient; and in marching in open column, every successive officer should watch the seasonable moment, after a wheel, of preserving his relative distance.

To STEP *off*, in a military sense, to take a prescribed pace from a halted position, in ordinary or quick time, in conformity to some given word of command or signal.

STEPPING *off to music*. In stepping off to music, or to the tap of the drum, it will be recollected, that the word of command is the signal to lift up the left foot, and that it comes down, or is planted, the instant the tap is given, or the music completes its first *bar*, so that the time must be invariably marked with the left foot, and not by the right, as has been practised by the British guards and the artillery, until a recent regulation.

Balancing STEP. A step so called from the body being balanced upon one leg, in order to render it firm and steady in military movements, &c. Men at the drill should be frequently exercised in this step. The manner in which it is executed is as follows:

At the word *march*, the left foot is advanced firmly, but without a jirk, the body is kept perfectly erect, the knee straight, the toe pointed out, the shoulders square to the front, and the whole weight of the body bearing on the right foot. Great care must be taken that the foot is thrown straight forwards, and that the shoulders do not go with it. When the men have remained in this position just long enough to make them perfectly steady, the word *right*, must be given. Upon which the left foot is planted firm, the body quite steady, and whole weight rests *à plomb* upon the left foot; the right foot is of course advanced as the left foot was before, and so on, the feet being thrown forward, alternatély, at the words *Right*, *Left*. The drill serjeant or corporal must see, that the toe of each man comes rather first ro the ground, that he rests on the flat of the foot that is planted, and by no means on the heel, that both knees are straight, and that his arms are kept close to to his side without constraint.

When a recruit has been rendered tolerably steady in this step, he must be made to stand on one leg, and move the other to front and rear gently; he must then bring that leg to the ground, and do the same with the other. He must be frequently practised in this until he becomes quite steady on his legs, and has acquired a free motion from his hips without working his body.

Lock STEP. See LOCK.

The side or closing STEP. A step which is taken in order to gain ground to the right or left, without altering the front of the battalion, or of closing it to its centre, whenever a chasm occurs in the line after it has wheeled from column, &c. This step is performed from the halt, in ordinary time, by the following words of command:—

Mark time.
Side step to the right—March.
Side step to the left—March.

Back STEP, (*Pas en arriére*, Fr.) A step taken to the rear from any position without any change of aspect. The back step is performed in the ordinary time and six inches pace, from the halt, on a given word of command. It will be generally recollected, that a few paces only of the back step can be necessary at a time.

STEP *Back*, *March*, (*En arrière*, *Marche*, Fr.) A word of command which is given when one or more men are ordered to take the back step according to regulation.

Quick STEP, a military step, consisting of 24 inches, (of which 108 are to be taken in a minute, making 216 feet in a minute) which constitutes what is *now* called *common time* in marching. The command *quick* *march* being given with a pause between them, the word *mark time*, is to be considered as a caution, and the whole are to remain on the ground dressed in ranks, with the feet in motion at *quick* time; on the word *march*, they step off with the left feet, keeping the body in the same posture, and the shoulders square to the front; the foot to be lifted off the ground, that it may clear any stones, or other impediments in the way, and to be thrown forward, and placed firm; the whole of the sole to touch the ground, and not the heel alone: the knees are not to be bent, neither are they to be stiffened, so as to occasion fatigue or constraint. These instructions can only be complied with by means of a sedulous attention not only in the instructor at the drill, but by a constant application of that solid principle which directs, that all movements of the legs should come from the haunches. The knees, indeed, must bend, and the fore parts of the feet must unavoidably be lifted up, but both these natural actions may be done in so correct and quick a manner, that they will scarcely be perceptible. The elasticity of the instep, if properly managed, will always give a firmness to the tread. The arms are to hang with ease down the outside of the thigh; and a very small motion may be occasionally permitted, to prevent constraint. The head is to be kept to the front, the body to be well up, and the utmost steadiness to be preserved. The quick step is the pace to be used in all filings of divisions from line into column, or from column into line; and by battalion columns of manœuvre, when they change position, independently of each other. It must always be used in the column of march of small bodies, when the route is smooth, or the ground unembarrassed, and no obstacles occur; but in a long march in line of a considerable body, it is not to be required; otherwise fatigue must arise to the soldier, and more time will be lost by hurry, and inaccuracy (the natural consequence of hurry) than is attempted to be gained by quickness.

Quickest Step, (*Pas accelere*, Fr.) A step measuring 24 inches, which indicates *quickest time*, or *wheeling march*, and of which 130, making 260 feet, should be taken in a minute.

This step is applied chiefly to the purpose of wheeling, and is the rate at which all bodies accomplish their wheels; the outward file stepping 24 inches, whether the wheel is from line into column, during the march in column, or from column into line. In this time also, and by this step, should divisions double, and move up, when they pass obstacles in line; or when in the column of march, the front of divisions is increased, or diminished.

To Step *between*. To interfere.

To Step *forth or forward*. To take an active part in any thing. Thus, when the circle was formed, the grenadiers *stepped forward* to beg off their comrade, &c. The officers stepped forward, and remonstrated against their colonel.

Step is likewise figuratively used to signify promotion. As the next step from a lieutenancy is a troop or company, and from that to a majority; except in the British guards, who have the exclusive privilege of going over this intermediate rank, and *stepping* into a lieutenant-colonelcy at once.

To Step *over*. To rise above another. This term is generally used in a bad sense. As, young men of interest and connection frequently *step over* old soldiers.

STEWARD. One who manages the affairs of others. In all well conducted messes belonging to military corps, certain officers are named to act as stewards, for some specific period. These act conjointly with the treasurer and pay-master for the good of the whole.

STERE, *Fr.* A measure for fire-wood, which has been adopted by the French, since the revolution. The stere is equal to the cubic metre. It is used instead of the *voie*, and is about half of that measure. The *Corde*, in decimals, answers to 3,335 steres.

STEREOGRAPHY. The art of drawing the forms of solids upon a plane.

STEREOMETRY. The art of measuring all sorts of solid bodies.

STICK. The same as Baton, an instrument of dignity, which is occasionally carried by persons and officers in high situations, particularly by such as are in waiting near the royal person.

STICKLER. A sidesman to fencers: or second to a duellist.

STILETTO. A small dagger, with a round blade, and sharp point.

STINKPOT. A firework made of offensive combustibles, which is used at sieges, &c. See Laboratory.

STIRRUPS. Iron hoops suspended by straps to each side of the saddle, in which the horseman sets his feet in mounting or riding.

STOCCADO. A push or thrust with a rapier.

STOLE. See Order of the Stole.

STOCK. The wooden part of a musquet or pistol.

Stock. A part of an officer's dress, which consists generally of black silk or velvet, and is worn round the neck instead of a neckcloth. The soldier's stock is of black ribbed leather, and is part of his small mounting. Red stocks were formerly worn in the British guards; they are still so in some Prussian regiments.

Stock *Purse*. A certain saving which is made in a corps, and which is applied to regimental purposes. In some corps this fund is so honestly managed, that, without encroaching upon the public, the most beneficial effects are produced: in others again, it is so mysteriously handled between commanding officers and paymasters, that it becomes a perpetual source of discontent and jealousy.

STOMPER, *Fr.* To sketch out a design, or to draw with colors that have been pounded into dust. Instead of the pencil or crayon, a roll of paper which is dipped into the colored dust, serves to put on the different colors.

STONES, in *military architecture*, may be distinguished into two sorts; that is, into hard and soft: hard stone is that which is exposed to the open air, such as rocks, and which lie loose upon the surface of the earth: the soft stone is that which is found in quarries, and under ground. It is undoubtedly true that the hardest stones make the most durable works; but as there is seldom a sufficient quantity to build the whole fortification, the best serve in the facings of the work, in the foundations, and where the works are exposed to the violence of the waves.

The stones of some quarries are very soft, and easily worked, when first cut out; but, when exposed for some time to the open air, become very hard and durable.

As there is undoubtedly a kind of sap in stones as well as in timber, by which the same sort of stone, taken out of the same quarry, at one season, will moulder away in a few winters, but, when dug out in another season, will resist the weather for many ages: stones should always be dug in the spring, that they may have time to dry before the cold weather comes in; for the heat of the sun will extract the greatest part of the moisture, which otherwise expands in frosty weather, and causes the stone to splinter, although it be otherwise hard and good.

As stones lie in the quarries in horizontal beds or strata, (that is, they cleave in that direction) and have likewise a breaking vein, which is perpendicular to the former; both these directions must be observed in cleaving, as well as in raising them out of their beds. Stones that will not easily cleave must be blown up by gunpowder.

Marble, is of various sorts and colors; the most beautiful of which is exported from Italy. The marble found in England is mostly blackish, and so very hard and difficult to polish, that very little use is made of it, except to burn and make lime. The American marbles are various, and every day produces new discoveries of marbles of the most beautiful colors.

Fire-STONE, or *Soap Stone*, serves chiefly for chimneys, hearths, ovens, furnaces, and stoves; being a dry, porous, gritty stone, which bears the heat without breaking: on account of this quality, it is called *fire-stone*.

Purbeck-STONE, is a hard, greyish stone, and serves chiefly for paving, coping of walls, and for all such other uses where strength is required, it being the most hard and durable stone.

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article ought to be purchased by the surgeon, who is required to keep a book, in which he is to enter the amount of the weekly consumption of each man according to the diet table; and this book, with the diet table, is to be laid before the commanding officer and paymaster every week to be examined and signed by each; and it is of the utmost importance to the welfare of the service, that every commanding officer, and every regimental paymaster, should superintend the expenditure.

STOPPER. A piece of wood or cork, made to fit the bore of a musquet barrel, which soldiers use in wet weather; and on other occasions, when the piece is not loaded, to prevent moisture and dust from getting into the barrel.

STORE-*keeper*, in *war time*, must take care of the stores in the magazines, such as the provisions, forage, &c. receive the same from contractors, and deliver them out to the troops. He has several clerks under him, appointed to the different departments, of provisions, hay, straw, oats, &c. In time of peace he has charge of all the public stores, belonging both to land and sea service.

STOREHOUSE. See MAGAZINE.

STORES, *Military*, are provisions, forage, arms, clothing, ammunition, &c.

Medical STORES *on board transports.*—Certain articles of diet which are put on board each transport, are so called. These are to be considered as intended solely for the use of the sick, or convalescents; they are to remain in the charge of the master of the transport, and only to be issued upon demand in writing made by the surgeon from time to time as he shall judge proper; or, when there is no surgeon, upon demand of the commanding officer. And the surgeon or commanding officer is to give the master at the end of the voyage, a certificate that his demands for the said medical stores have been made only upon proper occasions, and have not been expended for any other use, than that of the sick, or convalescent.

To STORM, in *military matters*, to make a violent assault on any fortified place, or works.

STORMING *party*. A select body of men, consisting generally of the grenadiers, who first enter the breach, &c.

STRAGGLERS. Men who wander from the line of march. It is the business of the rear guard to pick up all stragglers, &c.

STRAPONTIN, *Fr.* A sort of hammock which is used in hot countries, &c. See HAMMOCK.

STRATAGEM, in *war*, any scheme or plan for the deceiving and surprising an army, or any body of men. See SURPRISE.

STRATAGEMS *in war*, (*Stratagêmes de guerre*, Fr.) Certain feints which are resorted to by able generals, &c. to cover their real designs during the operations of a campaign. It is impossible to lay down any specific rules on this head, as every general, according to the capacity and activity of his mind, makes use of the various means and expedients which grow out of times, circumstances, and occasions. It has been asserted by some writers, that all sorts of stratagems, even those which are connected with treachery may be adopted for the accomplishment of any design. This maxim is, however, strongly combated against by those who have written upon the law of nations.—Probity, in fact, and elevation of mind, (which are superior to the pitiful measures of treacherous affiliation or intercourse,) should always bear the ascendancy in human actions. There are stratagems which may be practised and carried on, without the least deviation from honor and good faith. Many distinguished generals have had recourse to these; but none ever succeeded so well as Hannibal.—Wishing to cross the river Rhone, and being in want of almost every article that was necessary to effect the passage in the presence of an enemy who was diligently watching his motions, he caused him to imagine that it was his intention to keep the ground he occupied. He ordered large fires to be lighted up in different quarters of his camp, and directed some of his troops to shout and make loud noises, as if they were perfectly stationary. During this apparent state of inactivity, he broke up his camp, marched up the river side, and crossed it at a place where it was least expected he would make the attempt.

General Washington executed a similar stratagem with success on the British at Trenton; and a very memorable stratagem in baking bread at King's bridge and amusing the British at New York, while he made forced marches with his army for Yorktown, to capture Cornwallis.

Among other good qualities which are indispensibly necessary in an able general, that of knowing how to conceal a projected march, and to anticipate the motions of an enemy, is not the least important.

The army under the command of the duke of Saxe-Weimar, having laid siege to Brisac in 1638, the imperialists went to the relief of that place. The duke, on receiving intelligence of their approach, instantly marched against them, with a body of forces composed of Swedes and French allies. The imperialists, who had advanced by rapid marches, had gained possession of an eminence by means of which they would have enjoyed all the advantages of local superiority, had not the count de Guebriant, who was then a lieutenant-general in the Swedish service, suggested a stratagem to dislodge the enemy. The plan was adopted, and it succeeded to the full extent of his design.

The drums and trumpets of the different corps were collected together, and stationed in a neighboring wood, so as to draw the whole of the enemy's attention away from the quarter proposed to be carried. The imperialists being naturally led to believe, from the noise and concurrence of so many military instruments, that they were going to be attacked from that quarter, beat to arms, and left their position in complete order of battle. They had scarcely quitted the eminence, before the duke of Saxe-Weimar appeared in their rear, took possession of the ground which they had so imprudently abandoned, and became master of all the advantages which his enemy would otherwise have enjoyed. An interesting account of this ingenious manœuvre may be found in the History of Le Marechal de Guebriant.

Stratagems of this description have been frequently used by the French during the present war, particularly in Italy. Stratagems, in fact, constitute one of the principal branches in the art of war.—They have been practised in all ages by the most able generals, and have contributed in a great degree, to their military reputation. Virgil, in his Æneid, book II. says—

Dolus an virtus, quis in hoste requirat.

The history of France abounds with instances in which stratagems of every kind have been successfully practised.—It seems the peculiar talent of the inhabitants of that country to derive advantages from well concerted feints, &c. in war, and to secure their victories more by science than by downright hardihood.

It has been wisely observed, by a French writer, under the article of *Stratagêmes de guerre*, that a general who is defeated in a general action, may attribute his failure to fortune, although it is universally acknowleged, that chance or fortune has a very trifling share indeed in pitched battles, while art and science regulate the different movements, and finally determine their issue. Whoever, therefore, suffers himself to be surprised by his enemy, cannot be said to stand wholly exculpated from ignorance or neglect, since it must have been in his power to have avoided the snares laid for him, by means of vigilant spies, and unremitting attention. This remark appears to us not only to be generally correct, but it seems more immediately applicable to all generals that have secret service-money at command. The influence of that commodity, (upon which no embargo can be laid) will be felt in every garrison, town, or sea-port; and those who have the management of it must be dull indeed, if they do not feel their way into the secret preparations of an enemy, before they hazard an attack against him.

Besides the different stratagems which may be used by an able general, to bring about the overthrow of the whole or part of an army, by leading it into an ambuscade, there are various ones which may be practised against a fortified place. To effect the latter purpose, you may contrive to get soldiers in disguise through the gates at unguarded hours; to introduce them through subterraneous passages, or by any other means that may offer. Before any attempt of this sort is made, every part of the fortifications should be narrowly reconnoitred, and as much knowlege be obtained of the interior situation of the place as can be procured by means of good spies, or from deserters. You must, above all things, be well assured, that the garrison does not strict duty; that the different guards are negligently attended to; that the soldiers who compose them are in the habits of drinking or gaming; that their officers miss their rounds, or go them without system or regularity; that the gates are ill guarded, and the avenues to them ill watched; and that there are certain places or entrances which are not watched at all; for it would be impossible to surprize any place that has been regularly fortified, while the garrison did its duty.

If it should appear practicable to surprise a town by taking advantage of the negligence of the sentries, &c. at some particular gate, previous means must be taken to introduce some soldiers dressed like market women, or in the garb of some religious order. You may then contrive to get a waggon or cart, seemingly loaded with hay or straw, but with soldiers concealed beneath it, so placed in the entrance of the gate that it will serve as an obstacle when it may be found necessary to shut it. In order to do this effectually, let a pin be taken out, so that the wheel comes off, or the axle tree gets broken.—The instant this is done, the soldiers who had entered the town in disguise must join the drivers, the men that have been concealed in the waggon get out, and the whole must rush upon the port-guard.—While this happens, the troops that have been placed in ambush round the fortifications, will advance with promptitude and firmness, and endeavor to get possession of the town before a sufficient force can be collected to repel the attack. In the year 1789, a rabble from Courtray took advantage of the carelessness of the imperial troops who were in garrison at Gand, in Flanders, and by seizing upon the gate and port-guard, brought about a temporary rebellion in the country. This indeed was done without stratagem; but the circumstance proves, that when the centries of a fortified place are negligent in their duty, a surprise is always practicable. We are precluded by the limits of our undertaking from going more fully into this important branch of military science. Several treatises have been written on the subject. Among others one appeared in 1756, intitled *Stratagêmes de Guerre*, illustrating from history the various stratagems which had been practised by some of the ablest generals during a long period of time down to the peace of

Aix-la-Chapelle. It was published by M. Carlet de la Rousiere, an officer in the French service, and acting engineer in the isles of France and Bourbon. It contains much curious matter. See *Am. Mil. Lib.*

Stratagem *and force united.* Count Turpin, page 43, vol. I. in his essay on the Art of War, judiciously remarks, that when an enemy, superior in force, is in possession of a pass, from which he cannot be dislodged but by art, stratagem and force should be blended together as often as possible. Onosander, the Greek general, set fire to a wood which was at the foot of a mountain in the enemy's possession, and which he wanted to go over; the flames and smoke forced the enemy to abandon it, and leave the passage free for him.

STRATARITHMOMETRY. In *war*, the art of drawing up an army, or any part of it, in any given geometrical figure; and of expressing the number of men contained in such a figure, as they stand in order of battle, either at hand, or at any distance assigned.

STRAW. According to the British regulations, published by authority in 1799, relative to the forage, &c. which troops are to receive in the home encampments, it is directed, that straw is to be allowed at the rate of one truss of 36 pounds to each paillasse for two men, *being a full bedding*: at the expiration of sixteen days to be refreshed with half a truss to each paillasse; at the expiration of 32 days to be removed, and a fresh bedding of one truss is to be given, and so on every succeeding period of sixteen and thirty-two days.

For the sick in the hospital, the straw is to be changed as often as it may be deemed necessary.

Two trusses per troop or company are to be allowed for batmen, or servants, not soldiers; and three trusses per troop or company for the washerwomen, to be changed every sixteen days, not having paillasses.

Thirty trusses of straw per troop or company are allowed on first taking the field for thatching the women's huts.

Regiments, *not having paillaisses*, are allowed straw at the following rates:

On taking the field, two trusses of 36 pounds each to every five men, at the end of eight days to be refreshed by one truss, and at the end of eight days more to be refreshed again by the same quantity. At the end of twenty-four days the whole to be removed, and an entire new bedding to be given, and refreshed as before, viz. two trusses for every five men.

Four pounds of straw are to be added to the ration forage for the cavalry and artillery horses only.

Six pounds of straw are to be allowed to the general officers and staff, in addition to the prescribed ration of forage. See Regulations.

STRAW. *For straw!* is a word of command in the British service, to dismiss the soldiers when they have stacked their arms, so that they may be ready on the first signal given.

STREAKS, are the iron bands on the outside of the wheel to bind the fellies strongly together.

Streak-*nails*, are those driven through the streaks into the fellies.

STREET. See Encampment.

Street-*firing*. See Firing.

STRELITZ. A Russian word, whose plural number is *strelitzy*, derived from *strelai*, an arrow, in the same language. An ancient militia, which was formerly kept in pay among the Muscovites both in time of peace and in time of war, was so called. The men who composed it always served on foot, and were originally armed, as their name indicates, with bows and arrows. They afterwards received musquets or firelocks, and laid aside the bow and arrow. The rest of the Russian army, which was only called together in cases of emergency, retained the bows, arrows, and lances; with which each soldier armed himself according to his own particular whim or notion.

In the remote periods of the Russian empire, the strelitzy were the only regular body of troops that formed any part of the standing army of that country. It consisted of twenty or twenty-four thousand men, who enjoyed a multiplicity of privileges and immunities, and were quartered in one of the suburbs of Moscow, which is still called *Strelitzkaia Slabeda.* From the latitude allowed them, and the peculiar indulgencies which these soldiers enjoyed, they might be well compared to the Prætorian bands under the first Roman emperors, and, in some degree, to the Janizaries of Constantinople. They frequently mutinied like the latter, and interfered in the management of public affairs. Their last revolt, however, was fatal to them. It happened in 1698, during the absence of the Czar Peter the first, who on his return into Russia, broke the whole corps, erased its name from the list of military establishments, and put his troops upon the same footing that those of the rest of Europe were.

The established pay of a *strelitz* was seven rubles, and twelve combs and bushels of grain every year.

Grain, even in these days, is given as a necessary ration to a Russian soldier, which he bakes or roasts upon thin plates of iron, and then reduces to meal, making therewith a sort of dough, called *Toloqueno.* Every man always carries a good portion of this subsistence about him, to which he adds a small cruet of vinegar. By soaking this meal in water mixed with a little vinegar, he contrives to make a sort of soup or broth, which the Russians, who are fond of acids, find extremely palatable; and by giving it the consistency of dough, it serves for bread and meat. When the Russian soldier can procure a few greens, such as cabbage, &c. to mix with his *toloqueno*, he makes a complete meal, which he calls *Chety*. A *tcharotcheka*, or small glass of brandy, makes up the measure of a full repast. It must be acknowleged, that where soldiers can be brought to satisfy the cravings of nature in this economical manner, great advantages must be derived, especially in long marches through an uncultivated or desert country. We cannot, however, recommend its adoption except in cases of urgent necessity, and on services where there might be a possibility of absolute want, from the destruction or poverty of a country into which an army marches. The fare itself is not calculated to add vigor and activity to the body, or to keep alive that promptitude and fire which are required in military operations.

STRENGTH. This word may be variously understood in military matters, viz.

Strength. Fortification; fortress; strong hold. It likewise signifies armament; power; force. In all returns which are made of corps, *strength* implies the number of men that are borne upon the establishment, in contradistinction to *effective force*, which means the number fit for service. Hence, the strength of a battalion, troop, or company, &c. The allowance for the repair of arms, &c. is issued according to the return which is made, not of the *effective force*, but of the established strength of a troop or company.

STRICT. Exact, severe, rigorous; the contrary to mild, indulgent. Hence, a strict officer. It is sometimes used in a bad sense, to signify a petulent, troublesome commander.

To STRIKE. This word is variously used in military phraseology, viz.

To strike *at*. To attack; to endeavor to destroy, directly or indirectly.

To strike *off*. To erase; to blot out; as to strike off the list of the army. This can only be done by the order of the president of the United States.

To strike *a tent*. In castrametation, to loosen the cords of a tent which has been regularly pitched, and to have it ready, in a few minutes, to throw upon a bat-horse or baggage waggon.

To strike *terror into an enemy*. To cause alarm and apprehension in him; to make him dread the effects of superior skill and valor.

To strike *a blow*. To make some decisive effort.

To strike *the colors*. This is properly a naval term, but it may be applied to military matters on some occasions. Thus at the battle of Fontenoy, when the British had driven the French out of the field, Louis XV. who was upon an eminence in the neighborhood with his guards, &c. ordered the royal standard to be *struck*, from a full persuasion that the day was lost.

STRIPE. Dr. Johnson calls a stripe a lineary variation of color. Regimental sword knots are directed to be made of blue with silver or gold in stripes.

STRUCTURE, (*Structure*, Fr.) The manner in which any thing is built. *Une édifice de belle structure*. An edifice which is built in a handsome manner.

To STRUGGLE *with or against*. To make extraordinary exertion in direct contest with an enemy, or against superior forces.

STUC, *Fr*. Stucco, gypsum or plaster of Paris.

STUCCO. A sort of fine white mortar or composition, which is made of lime mixed with gypsum or lime. It is used for the outward covering of all sorts of works, and when it is perfectly dry, it has the appearance of the finest polished stone.

STUCATEURS, *Fr*. The men employed at stucco work.

SUB. A familiar abbreviation which is used in the British army to signify *subaltern*.

SUB-*brigadier*. An officer in the British horse-guards, who ranks as cornet.

Sub-*lieutenant*. An officer in the British regiments of artillery and fuzileers, where they have no ensigns; and is the same as second lieutenant.

SUBA, or *Soobah*, Ind. A province.

SUBADAR, *Ind*. The governor of a province. It likewise signifies a black officer, who ranks as captain in the English East India company's troops; but ceases to have any command when an European officer is present.

SUBADARY, *Ind*. The appointment or office of a subadar.

SUBALTERNS, (*Officiers subalternes*, Fr.) Subaltern officers. This word is used among the French, as with us, to signify all officers of a certain inferior degree, viz. *Les subalternes*, the subalterns. The term is commonly applied in a regiment to the officers below the rank of captain, in relation to that officer; but, strictly, every officer is subaltern to the grades above him, as the captain is subaltern to the major, and so upward.

SUBDIVISION. The half of a division. Thus if a company forms a division, divided it forms two subdivisions. In the British organization, two companies added together make a grand division; except the flank companies, which constitute grand divisions of themselves; but in actual service, according to the best modern principles, the division is not limited to any given number, but must depend on the strength of the force, and the skill and discretion of the officer.

Division, in the French system, is also applied in the same manner as the term brigade in the English; the French *division* consists of several regiments, three or more, up to seven or eight; the general of division is of the same rank as the major general in the British establishment.

SUBDUR, *Ind.* Chief.

SUBJECT, (*Sujet*, Fr.) One who lives under the dominion of another. It is only used in the first instance, as no one can be the subject of a secondary power, although he is bound to obey his orders. Thus soldiers are obliged to submit to the orders of a general, but they are not his subjects. The French make the same distinction.

SUBORDINATION. A perfect submission to the orders of superiors; a perfect dependence, regulated by the rights and duties of every military man, from the soldier to the general. Subordination should shew the spirit of the chief in all the members; and this single idea, which is manifest to the dullest apprehension, suffices to shew its importance. Without *subordination* it is impossible that a corps can support itself; that its motions can be directed, order established, or the service carried on. In effect, it is *subordination* that gives a soul and harmony to the service: it adds strength to authority, and merit to obedience; and while it secures the efficacy of command, reflects honor upon its execution. It is *subordination* which prevents every disorder, and procures every advantage to an army.

SUBSIDIARY *troops*. Troops of one nation assisting those of another for a given sum or subsidy.

To SUBSIST. In a military sense, to give pay or allowance, &c. to soldiers; as a captain of the light company will subsist 20 men belonging to other companies, for so many days during the march. The French do not use the term in the same sense.

SUBSISTANCE *des pièces*, Fr. This term is used among the French to signify the pay or allowance which is given to the officer, bombardier, and men belonging to the train of artillery who serve the batteries.

SUBSISTENCE, (*Subsistance*, Fr.) in a military sense of the word may be divided into two sorts, viz. That species of subsistence which is found in the adjacent country: such as forage, and frequently corn that is distributed in parcels; and that which is provided at a distance, and regularly supplied by means of a well-conducted commissariat. The latter consists chiefly of meat, bread, beer, &c. To these may be added wood or coals, and straw, which are always wanted in an army. Every general will take proper precautions to have his men well supplied with these first necessaries in life. Baron d'Espagnac has written at large upon this important subject. See *Elemens Militaires*, tom. i. page 162; and that writer's *Suite de l'essai sur la science de la Guerre*, tom. i. page 246.

SUBSISTENCE likewise means pay or allowance.

SUBSTITUTE *in the militia*. A person who voluntarily serves in the room of another.

SUBSTITUTION, *Fr.* An algebraical term used by the French, signifying to substitute in an equation any quantity in the room of another, which is equal to it, but which is differently expressed.

SUBTANGENT, in any curve, is the line which determines the intersection of the tangent in the axis prolonged.

SUBTENSE, (*Soutendante*, Fr.) A geometrical term signifying the base of an angle, that is to say, a strait line opposite to an angle, which is supposed to be drawn from the two extremes of the section that measures it. Likewise the chord of an arch; that which is extended under any thing.

SUBURBS, (*Fauxbourgs*, Fr.) Buildings without the walls of a city.

SUCCESSION *of rank*. Relative gradation according to the dates of commissions, or the regulations established.

SUCCOUR, in *war*. Assistance in men, stores, or ammunition.

SUD, *Fr.* This word is variously used by the French. It signifies in the sea language the south wind and the southern regions; and it signifies in an absolute sense, one of the four cardinal winds which blows from the south. Hence *Le Sud*, the south wind. *Sud est ou sud ouest*, south east or south west.

SUISSES, *Fr.* The Swiss soldiers who were in the pay of France previous to the 10th of August 1792, were generally so called. It was also a general term to signify stipendiary troops. Hence *point d'argent, point de suisses!* which agrees with our cant phrase—No pay, no soldier.

SUITE, *or* SERIES, *Fr.* This term signifies generally any regular collection and successive distribution of things.

Officiers à la SUITE, *Fr.* Supernumerary officers attached to a regiment, &c. during the monarchy of France, who were not required to do duty with it.

SULPHUR, or *brimstone*, a volcanic mineral essential in making gunpowder and artificial fire-works.

SULTAN *or* SULTAUN, *Ind.* King. The title which was assumed by Tippoo Saib, chief of the Mysore country. Hence called Tippoo Sultaun.

SULTAN *shirki*, Ind. King of the east.

SULTAUNUT, *Ind.* The decorations or appendages annexed to royalty.

SUMMONS. The act of demanding the surrender of a place, or body of men.

SUMNUTCHEER, *Ind.* A word, among others, which signifies Saturday.

SUMOODER, *Ind.* The sea or main ocean.

SUMPTER. See BAT-HORSE.

SUN, *Ind.* The year.

SUNAUT, *Ind.* Old rupees on which a discount is allowed. Hence *Sunaut Rupees.*

SUNEEBAR, *Ind.* Another word for Saturday.

SUNEECHUR, *Ind.* A word likewise meaning Saturday.

SUNNUD, *Ind.* A charter, grant, or patent, from any man in authority. When it was given by the mogul, it obtained the appellation of *Firmaun.*

Sunnud *dewanny*, Ind. A grant or instrument in writing, which entitles a person to hold land in India.

SUNSET. See Retreat beating.

Sunset. The time at which the evening gun fires, and the retreat is beat in camp, or quarters, &c. When troops are embarked on board transports, the men parade at half an hour before sunset, quite clean as to their persons.

SUPERANNUATED, (*Surannè-ée*, Fr.) In a military sense, rendered unfit for service through old age.

SUPERFICIES, (*Superficie*, Fr.) Outline; exterior surface; extent without depth. The curved superficies are divided into two sorts, viz. the convex and concave

SUPERINTENDANT, (*Surintendant*, Fr.) A person appointed to take charge of any particular district or department. Hence, military superintendant.

SUPERIOR *officer*. Any officer of higher rank, or who has priority in the same rank, by the date of his commission, &c.

SUPERNUMERARY, (*Surnumeraire*, Fr.) Beyond a fixed or stated number. In a strict military sense it means the officers and non-commissioned officers that are attached to a regiment or battalion for the purpose of supplying the places of such as fall in action, and for the better management of the rear ranks when the front is advancing or engaged.

Supernumerary officers and non-commissioned officers must always divide their ground equally in the rear of the division they belong to, and pay the strictest attention to the orders which are issued for its exercise or movement.

If an officer is killed or wounded in action, the first supernumerary officer of the division takes the command, and so on to the quarter-master and serjeants.

To **SUPERSEDE**, (*Remplacer*, Fr.) See To Respite.

To be **SUPERSEDED**, (*Etre remplacé*, Fr.) Both these terms are used by the French in the same military sense that we employ them, viz. to be deprived of rank and pay for some offence, and to have others put in one's stead.

SUPPLEANT, *Fr.* A substitute.—Any person named to do the functions of another.

SUPPLEMENT. Addition; augmentation, in case of deficiency.

Supplement *of an arch.* In geometry or trigonometry, the number of degrees which it wants of being an entire semicircle; as complement signifies what an arch wants of being a quadrant.

Supplement *d'un angle*, Fr. Supplement of an angle. The number of degrees which are wanting in an angle to constitute or make up two angles.

Supplement, *Fr.* A certain pecuniary allowance, over and above the ordinary pay or subsistence, which was given by the king to officers belonging to the old French service.

SUPPLEMENTAL, SUPPLEMENTARY, (*Supplementaire*, Fr.)—Additional; such as fills up what is wanting.

SUPPLY. Relief of want; making up of deficiencies. A fresh supply of troops, ammunition, &c.

To **SUPPLY.** To make up deficiencies To aid; to assist; to relieve with something wanted. To fill any room made vacant. Thus, covering serjeants supply the places of officers when they step out of the ranks, or are killed in action.

To **SUPPORT.** To aid, to assist; it likewise signifies to preserve untarnished, viz. To support the ancient character of the corps.

Well **Supported.** Well aided, well assisted. It likewise signifies well kept up, as *a well supported fire from the batteries;* a well supported fire of musquetry.

SURAPAN, *Ind.* An honorary dress, which is given to an inferior by a superior.

SURAT *Haal*, Ind. A state or representation of the case.

SURCINGLE. A girth with which the saddle or any other burden is bound upon a horse.

SURFACE, in *fortification*, is that part of the side which is terminated by the flank prolonged, and the angle of the nearest bastion: the double of this line with the curtain is equal to the exterior side.

SURGEON, (*Chirurgien*, Fr.) A staff officer, who is chief of the medical department in each regiment or hospital, &c.

Surgeon-*general*. The first or senior surgeon of an army.

Particular instructions to the regimental surgeons of the line in the British service.

Each regimental surgeon of the line, when provided with a chest of medicines, is required half yearly to make a return to the inspector of regimental hospitals, (under cover to the secretary at war,) of the medicines used by him during the preceding six months, and what remain; and this return must be accompanied by an affidavit taken before a magistrate, that none of the medicines have, to his knowlege, been converted to private purposes, or applied to any use but that of the regiment, or some other military service; for which he must produce the special orders of the commanding officer, or of the inspector of regimental hospitals.

Should a regiment of the line be placed in an unhealthy situation; or, from any prevailing disease, should the surgeon's stock of a particular medicine be exhausted before the next yearly supply becomes due, he is to apply to the inspector of regimental hospitals, (under cover to the secretary at war) for a fresh supply; the existence of such cause for the extraordinary consumption of the medicines to be certified by the commanding officer.

If a medical officer of the line desires to use a medicine not in the dispensatory, he must procure it at his own expence.

Whenever wine is necessary for the sick of a regiment of the line, a return of the consumption thereof is to be made weekly to the inspector of regimental hospitals.

The medical and hospital expences of regiments of the line, and of their respective detachments, are to be inserted in the public accounts of the respective corps.

Every regimental surgeon is to make a report to the inspector of regimental hospitals, of the situation, size, rent, &c. of the hospital he proposes to hire; and unless on very pressing emergencies, no engagement is to be entered into without the permission of that officer, to whom is to be transmitted half yearly, viz. June 24th and December 24th, an abstract of the regimental hospital contingent expences, approved by the commanding officer of the regiment, accompanied with regular vouchers signed and certified by the paymaster.

When a soldier is punished, it is the duty of the regimental surgeon to attend at the execution of the sentence, and to see that the life of the culprit is not endangered by excessive rigor. He is, in fact, paramount to the commanding officer on this occasion, and ought to interfere whenever his judgment dictates. If any commanding officer should be hardy enough to continue the chastisement in spite of the surgeon's interposition, the responsibility will then rest with him.

Assistant SURGEON. The person who acts immediately under the regimental surgeon. In the regulations for improving the situation of British regimental surgeons and mates, which took place in 1796, it is expressed, that surgeon's mates in future are to be stiled assistant surgeons, and to be appointed by commission from the king, or by generals authorised by him. For further particulars respecting surgeons and assistant surgeons, see Military Finance, page 46.

Veterinary SURGEON. See VETERINARY.

SURINTENDANT *des Fortifications*, Fr. A place of great trust and considerable importance during the old French government. It was his duty to submit plans of places that were to be fortified, or of others that wanted repairing, to give in estimates of the expences that would attend the works, and to state to the directors the degrees of skill and activity which he had discovered in the different engineers who acted under him. He likewise communicated with the king on every weighty branch of ordnance. His allowance was fifty thousand livres per annum, out of which he gave six thousand livres, or 1200 *dolls.* to a first clerk, who received the like sum from the king for under-clerks and stationary.

SURINTENDANT *général des poudres et saltpêtres de France*, Fr. Superintendant general of powder and saltpetre magazines of France. An appointment in the old French artillery, which was created in 1634, and paid the Paulette.

SURMENER, *Fr.* To founder. A term in the French manege, signifying to over-ride or over-work a horse. Hence, *un chéval surmené.* A jaded horse, or one spoiled by too much work.

Les SURPENTES, *Fr.* The slings or straps used in the artillery.

To SURPRISE, (*Surprendre*, Fr.) in *war*, to fall on an enemy unexpectedly, in marching through narrow and difficult passes, when one part has passed, so as not easily to come to the succour of the other; as in the passage of rivers, woods, enclosures, &c. A place is surprised by drains, casemates, or the issues of rivers or canals; by the encumbering the bridge or gate, by waggons meeting and stopping each other; sending soldiers into the place, under pretence of being deserters, who, on entering, *surprise* the guard; being sustained by troops in ambush near the place, to whom they give entrance, and thereby seize it. Soldiers dressed like peasants, merchants, Jews, priests, or women, are sometimes employed for this purpose. The enemy sometimes send in their soldiers, as if they were yours coming from the hospitals, &c. they also dress their soldiers in your regimentals, who, presenting themselves at your gate as such, are immediately admitted, seize the guard, and become masters of the place. Sometimes houses are set on fire, and whilst the garrison comes out to extinguish it, troops who lay in ambush march in, and surprise the place. Officers commanding guards at the principal gates are lured out under various pretences; matters being so contrived that a party seize the gate in coming in with them. Sometimes an alarm is given at one side of the garrison, whilst you enter secretly at the other, which at that time is too often neglected.

SURPRISES, (*Suprises*, Fr.) In a military sense, may apply either to those measures which are adopted by one army in the field to surprise another, or to those which are followed in the attack of fortified places. The French make a distinction between *surprises de campagne*, and *surprises des places*, or the surprises which are practised against an army in the field, and those which are executed against fortified towns or places. What has been said under the article *Stratagems of War*, will equally apply to the latter system.

When it is found expedient to attempt a surprise in the field, a sufficient number of men must be collected for the purpose, not only of advancing with confidence against the enemy, but of being able to make good a retreat, should he prove stronger than was suspected. The troops that are selected for this duty should be remarkable for their fidelity, and be able to undergo the greatest fatigue. Intelligent and faithful guides must be distributed among the different troops and companies, in order to keep up the continuity of the march, and put those of the rear in the right paths, should they have deviated from the direct route or line of march.

If the detachment or corps, that is entrusted with the secret expedition or surprise, be marched out of an entrenched camp, proper precautions must be taken, to prevent any intercourse between the enemy and persons employed to send or give intelligence. To do this effectually, the instant the rear guard has left the camp, the gates must be shut, and the strictest orders be issued to prevent spies or deserters from stealing out. Small parties of cavalry and riflemen must likewise be sent forward, to scour the roads, and to pick up stragglers. Care is taken to have it understood by the people of the country, that these parties are detached, for no other purpose than to escort some waggons, which are expected for the use of the army, to parley, or apparently to execute some business that can neither create jealousy, nor give uneasiness.

About an hour after, it must be proclaimed, in and about the camp and adjacent country, that no officer, soldier, sutler, or inhabitant of the villages, &c. shall on any account go more than one quarter of a league from the army. Small scouring parties, with the provost marshal's field patroles, must be distributed beyond these limits, in order to pick up stragglers, and to search their persons lest they should be the bearers of letters, &c. A great number of small ambuscades must be laid along the leading avenues between the enemy's camp and your own. If, notwithstanding all these precautions, you should learn, that the enemy has gained some information respecting your movement, a report must be instantly spread to make him imagine, that you have some other design in contemplation.

If, during the night, or in the course of the day, small reconnoitring parties, belonging to the enemy, should be discovered upon the road, or about it, one half of your patrole or scouring detachment, must be placed in ambush along one side of the road, in order to take them in the rear, whilst the other half attacks them in front, and by thus surrounding them,

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hands of the detachment, and thereby to avoid sharing it with their comrades.—Patroles must be sent out of the camp, and be posted along the road or roads that lead to the place which has been surprised, with strict injunctions to stop all stragglers; and the quarter and rear-guards of the camp itself must see, that none enter before the detachment is regularly marched in. When any are found guilty of this unmilitary practice, they must not only be stripped of their booty, but they must also be severely punished for the sake of example. If there should not be a sufficient number of waggons to bring off the wounded, the cavalry must dismount, and the wounded be put upon their horses. But if it be found expedient to make use of the horse, you must then convey the disabled in the best manner you can, by taking all the horses, &c. which may have been found in the place you have surprised.

After a *surprise* has been accomplished, the troops employed upon that service, must, if possible, be marched back to head-quarters, by a different road to the one they took in advancing against the enemy. For it would be extremely impolitic to expose them even though their number were a third greater than that of the enemy, to a second action; under the manifest disadvantages of being fatigued with the march, and the attack they had just made, and of being encumbered with the booty, &c. of the place they had surprised. Their retreat must be effected through the shortest way back. But if there should be the least ground to apprehend, that any attempt might be made by the enemy to cut them off, the first movement must be upon the same road they came, and when the night approaches, the troops must be suddenly countermarched, in order to take a different road, and to avoid any ambush that might be laid by the enemy.

Under these circumstances, every measure must be embraced to deceive the enemy. Some prisoners may be suffered to escape, before the troops have been countermarched, in order to give false information; some mules or horses may be left on the road, and small parties of drummers, &c. be detached forward to keep beating along the first road, as if the whole body were marching that way. Fires may also be lighted by patroles sent forward for the purpose. Among other means, which may be resorted to, to induce the enemy to believe that the original line of march has been continued, that of sending horses and men forward to mislead them by their footsteps is not the worst imagined.

It is more than probable, that if the retreat be made during the night, and through an enclosed or intersected country, the enemy will scarcely run the risk of pursuing, lest ambuscades should be formed to surprise him on his march.

If, notwithstanding all your precautions, the enemy should get intelligence of what has happened, and in consequence thereof he should have time to collect his forces together in order to attack you in your retreat; under these circumstances a position must be taken that is best suited to the kind of troops you have with you, and to their effective number.

If there be a ford, a bridge, or a defile, near to the ground you have taken up, which the enemy must unavoidably pass, the greatest expedition must be made to get beyond the obstacle, so as to have it securely in your rear. Should the obstacle be upon either of your flanks, a detachment must be posted there to keep the enemy in check, while your main body continues on its march. If you cannot conveniently send forward your booty, for fear of weakening your forces, it must be placed in such a manner as not to be in the way when you find it necessary to engage the enemy.

As soon as the enemy approaches, the whole body must be halted, and the proper dispositions be made for battle. The guard that is entrusted with the care of the prisoners, must instantly strip them of their swords, bayonets, and of every offensive weapon, (supposing them to have had permission to wear them) and must order them to sit down, threatening to shoot or cut down the first man that should presume to stir. On this account, the men who compose the guard, should always be ready to do their duty upon the least symptom of irregularity. A small cavalry detachment is usually employed upon this service, as it would not be in the power of the infantry to act with so much promptitude and activity. Before the troops are ranged in order of battle, directions must be given for every soldier to take off his knapsack, or havresack; for if the men were allowed to retain this load of baggage and booty, it would not be in their power to act.

History furnishes us with various instances in which fortified places, strong holds, and gates, have been surprised. There are others again in which *surprises* have been practised with success by means of spies, and of secret intercourse with one or more of the party against whom you are engaged. In 1707 several Miquelets disguised themselves as peasants, entered Balvastro, and remained concealed in the houses of some of the inhabitants, who supplied them with arms to enable them to attack the gate of Monsons, in order to co-operate with a detachment which was advancing towards that quarter for the purpose of surprising the place. But they did not succeed; for two regiments which lay in the town to guard the hospitals and magazines belonging to the army, instantly flew to arms, marched against the detachment, and forced them to retreat.—Had the latter been superior in force, it is more than probable, that the stratagem used by the Miquelets, and seconded by the treachery of the inhabitants, would have amply succeeded. In 1580, count Egmont surprised Courtray, by ordering a number of determined good soldiers to get into the town *à la débandade*, and to remain concealed in the houses of the Roman catholics. See *Stratagemes de Guerre*, page 164, &c. &c. For various interesting particulars that regard the article we have been cursorily discussing, we refer our readers to *La Suite de l'essai sur la science de la guerre*, tom. iii. page 259; and tom. iv. page 87. Likewise *Les Œuvres Militaires*, tom. ii. page 69; and to the *Stratagemes de Guerre*, page 173.

To prevent a Surprise. Turpin in his Art of War, observes, that it is not sufficient for the security of the quarters, that they are well distributed, that the guards of horse are posted on the outside, and guards of foot on the inside, and that patroles also are added to them; detachments must be sent out in advance of the guards, in order to make discoveries.

A quarter should never be imagined to be totally secure, whilst there are only guards before it: it would not be difficult for the enemy to come close up to them, particularly if the country is enclosed, either during the day or night; and if it is an open country, in the night time only.

Detachments in advance of the quarters are absolutely necessary, even when there are guards; they should be increased according to the number of the troops, and in proportion to the extent of country to be guarded.

These detachments should march separately in the front, and they should occupy as much country as possible upon the flanks; they must march upon the roads leading to the enemy. In the day time, they must scour the hedges, thickets, and woods, the villages, the hollows, and every sort of place that may serve for an ambuscade: in the night time, they must draw near the quarter, and remain at the distance of at least four hundred paces, and even further if the country is open. In the night, detachments must march very leisurely, not advancing, but crossing each other; and beside the word given out in orders, they will have another particular one to recognize each other.—Every now and then they must stop and listen, in order to discover, whether they can hear any thing. The officers commanding the detachments should avoid fighting till the last extremity; they should constantly bear in mind, that the sole purpose of their being ordered to advance, is to preserve the quarters from a surprise.

These detachments should not continue out above six or eight hours, and consequently should never dismount. If there are any hussars in the quarters, they should be employed in these detachments preferably to any other troops, as they are better calculated to scour a country than heavy cavalry, or even dragoons; their horses being more in wind and less liable to be fatigued. It is, besides, the sort of war which is natural to hussars.

As soon as these detachments are returned, others should be sent out for the same purpose, as the quarters should never be uncovered in front. If these detachments hear any thing in the night, the commanding officer should send to discover what it is, and must afterwards convince himself of the truth of it: if it should be occasioned by troops, he will directly send an hussar to the commanding officer of one of the guards, if there are any in the front of the quarters; but if not, then to the commandant of the first quarter, who will apprise the general.—He must conceal himself in some place, from whence, without being discovered, he will with greater ease be able to form a judgment of what is marching towards him; and when he shall be more confirmed that they are enemies, he will send a second hussar to give notice to the first post, who will inform the general; and will always continue to observe their motions by marching either on their flank, or before them. See *Am. Mil. Lib.*

To SURRENDER, (*Rendre*, Fr.) To give up a town, post, or other fortification, agreeably to articles, &c.

To Surrender, (*Se rendre*, Fr.) To lay down your arms, and give yourself up as a prisoner of war.

Surrender, (*Reddition*, Fr.) The act of giving up. As the surrender of a town or garrison.

Surrender of general Burgoyne, 17th October, 1777, at Saratoga.

Surrender of general Cornwallis 19th October, 1779, at Yorktown.

To SURROUND. In fortification, to invest. In tactics, to outflank and cut off the means of retreating.

Surrounded. Inclosed; invested. A town is said to be surrounded when its principal outlets are blocked up; and an army, when its flanks are turned, and its retreat cut off.

SURSOLID. The fourth multiplication or power of any number whatever taken as the root.

SURVEILLANCE, *Fr.* Inspection; superintendance; the act of watching. The substantive is new among the French, and comes from *Surveiller*, to watch.

SURVEY. A survey is an examination of any place or stores, &c. to ascertain their fitness for the purposes of war, &c.

SURVEYING. In military mathematics, the art or act of measuring lands; that is, of taking the dimensions of any tract of ground, laying down the same in a map or drawing, and finding the content or area thereof.

Surveying, called also *geodæsia*, is a very ancient art; it is even held to have been the first or primitive part of geometry, and that which gave occasion to, and laid the foundation of all the rest.

Surveying consists of three parts: the first is the taking of the necessary measures, and making the most necessary observations, on the ground itself: the second is, the laying down of these measures and observations on paper: and the third, the finding the area or quantity of ground there laid down. The first is what we properly call *surveying;* the second we call *plotting*, *protracting*, or *mapping;* and the third *casting up*.

The first, again, consists of two parts, viz. the making of observations for the angles, and the taking of measures for the distances. The former of these is performed by some one or other of the following instruments, viz. the theodolite, circumferenter, semi-circle, plain table, or compass. The latter is performed by means either of the chain, or perambulator.

The second branch of surveying is performed by means of the protractor, and plotting scale. The third, by reducing the several divisions, inclosures, &c. into triangles, squares, trapeziums, parallelograms, &c. but especially triangles; and finding the areas or contents of these several figures. See *American Mil. Lib.*

SURVEYOR *of the Ordnance.* See ORDNANCE.

SUSBANDE, *Fr.* The iron band or plate which covers the trunnion belonging to a piece of ordnance, or to a mortar, when either is fixed upon its carriage.

SUSPECT, *Fr.* A term adopted by the modern French to signify any person suspected of being an enemy, or indifferent to the cause of the revolution.—Hence—*Classe des suspects*, Fr. The list of the suspected. *Reputé suspect*, Fr. Looked upon as a suspected person.

To SUSPEND, (*Suspendre*, Fr.) In a military sense to delay, to protract. Hence to suspend hostilities. It is likewise used to express the act of depriving an officer of rank and pay, in consequence of some offence. This sometimes happens by the sentence of a general court-martial, or by the summary order of the president through the secretary at war. In both cases it is usual for the commanding officer of the regiment to report him to the general of the district, by whom he is again reported to the commander in chief through the adjutant-general. He is then directed, by letter to the commanding officer of the regiment, to be suspended agreeably to the nature of the transgression. In a trifling case, he is only suspended from pay, and is respited accordingly upon the next muster roll for the government of the regimental agent. But when the offence is aggravated by palpable neglect, or obstinacy in not send- satisfactory reason for his absence, (which can only be done by vouchers from the medical board, &c.) he is suspended from both rank and pay. So that to be suspended is either partially or generally to be deprived of the advantages of a military appointment.

To SUSPEND *hostilities.* To cease attacking one another.

SUSPENSION *of Arms.* A short truce that contending parties agree on, in order to bury their dead without danger or molestation; to wait for succours; or to receive instructions from a superior authority.

SUSPENSION, as a military punishment, was probably intended to operate as pecuniary fining does in that of the common law; but (to use Mr. Sullivan's words, in his treatise on martial law) it can neither be considered as deprivation or degradation. It does not divest an officer of his military character, though it puts him under a temporary incapacity to exercise the duties of his station: he still possesses his rank, though he does not reap any immediate advantage from it: It, in fact, may be looked upon and considered as borrowed from the ecclesiastical system of jurisdiction, which admitted suspension as a minor excommunication.

One stubborn difficulty, however, seems to present itself from suspension; and that is the article of pay and allowance. For if an officer shall have been suspended from the exercise of the authority annexed to his rank, and to have the pay of his allowance also suspended, he certainly seems warranted to plead such suspension in bar to the proceedings of a court-martial; there being always an implied contract between a soldier and his employer, that in consideration of certain pay and advantages granted by the one, the other shall submit to military discipline; and the obligation being mutual, when one fails in the performance of his part, he frees the other from the observance of his; therefore, when the pay and other advantages are suspended by the employer, the subjection to military discipline would *seem* also suspended. But this difficulty is easily removed, from the circumstances of the officer so suspended, still holding his commission; and from his submitting himself to the punishment which hath been inflicted on his transgression. The latitude of this principle hath even been seen to go farther, and under the sanction of such authority, that (since his majesty hath been graciously pleased to direct, in cases of doubt, members of a court-martial shall be guided by their consciences, the best of their understandings, and the custom of war in the like cases) it may be said to establish a precedent, which may with safety be appealed to. We here allude to the trial of lord George Sackville, who, at the time he was put upon the judgment of a general court-martial, had (so dear are the honor and reputation of a soldier) *neither military* *employ nor commission* under his majesty; and yet he was deemed entitled to an awful and solemn investigation of his conduct; application, indeed, having been previously made in his name, and he having declared himself willing to abide by the decision of the court. In a word, then, it may, without risking too much, be asserted, that an officer under suspension may be considered as *strictly amenable* to martial law for any trespass or transgression he shall commit. The same writer observes, in a preceding page, that suspension is a specific punishment, for a specific crime; but it is a punishment which does not free a man from his military obligations. On the contrary, he still is considered as in the service; he holds his commission, and at the expiration of the term of suspension, becomes a perfect man again. If therefore during the continuance of this chastisement, he should attempt to go over to the enemy, to desert, or hold treasonable correspondence, he certainly is, in such cases, to be dealt with according to martial law. Pages 86, 87, and 88, Thoughts on Martial Law.

The late Mr. Tytler, deputy judge advocate of North Britain, who has published an essay on military law, quotes the case of lord George Sackville, when he treats of officers under suspension, and agrees in every point with the author just referred to. Suspension, he observes, though it has the effect of depriving an officer for the time of his rank and pay, and putting a stop to the ordinary discharge of his military duties, does not void his commission, annihilate the military character, or dissolve that connection which exists between him and the sovereign, of whom he is a servant. He retains his commission, and is at all times liable to a call to duty, which would take off the suspension. See Essay on Military Law, pages 131, 132

SUSTAIN. To sustain is to aid, succour, or support, any body of men in action, or defence.

SUTLER *and Victualler* may be considered as synonimous terms as far as they relate to military matters; most especially when an army lies encamped, or rather takes the field. A sutler may be considered as one who follows the camp, and sells all sorts of provisions to the soldiers. There are also sutlers in garrison towns, who serve the soldiery, and are subject to military regulations.

Among the French, according to the present establishment of their army, a sutler is a soldier or inferior officer, who is authorised to follow head quarters, and to be constantly with the corps to which he is attached. He is permitted to sell the necessaries of life to the soldiers, and under certain restrictions, to deal in wines and spirituous liquors.

The sutlers are usually chosen from the regiments to which they belong, and are subordinate to the quarter-masters, after they have been appointed by the regimental committee or council of administration. They receive a licence enabling them to sell and buy, which licence must be approved of by the chief of the etat major, or staff of the division, in which the corps is stationed, or under which it acts.

The sutlers attending head-quarters are licensed by the quarter-master general. In order to distinguish them from adventitious travellers or pedlars, &c. it is wisely recommended by Paul Thiebault, author of a treatise upon the duties of an etat major, or staff in general, that they should have a particular number, which is to be engraved upon a tin plate, and constantly worn by them, as a mark of their being licensed by the quarter-master general.

When an army moves, the sutlers accompany the baggage. As many irregularities must naturally grow out of this necessary evil, the conduct of sutlers ought, at all times, to be narrowly watched, and severe penalties to be announced in general orders for every instance of unlawful depredation among the inhabitants, or of disorder in their booths. It is the duty of the piquet, at night, to be particularly watchful on this ground.

SUTURE. A manner of sewing or stitching, particularly of stitching wounds.

SWALLOW'S-*tail*. In fortification, an out-work, differing from a single tenaille, as its sides are not parallel, like those of a tenaille; but if prolonged, would meet and form an angle on the middle of the curtain; and its head or front composed of faces, forming a re-entering angle. This work is extraordinarily well flanked, and defended by the works of the place, which discover all the length of its long sides, &c.

SWAMMIES, *Ind.* Pagan gods or idols.

SWAMP. See MARSH.

SWAY. The swing or sweep of a weapon. Likewise power, as military sway.

SWEEP-*bar*, of a waggon, is that which is fixed on the hind part of the fore guide, and passes under the hind pole, which slides upon it.

SWEEPING. A word which is peculiarly attached to one of the sections or clauses in the articles of war. Hence, *Sweeping Clause*.

SWEEPING *Clause or Section*. This comprehensive clause states, that all crimes not capital, and all disorders and neglects, which officers and soldiers may be guilty of, to the prejudice of good order and military discipline, though not specified in any of the foregoing rules and articles, are to be taken cognizance of by a general or regimental court-martial, according to the nature and degree of the offence, and to be punished at their discretion.

This wisely imagined clause serves as a check to the paltry tricks and subterfuges, which are sometimes resorted to by men who are not thoroughly soldiers. It frequently happens, even among officers, that the service is hurt and embarrassed by the ingenuity of evasive characters, who think they are safe, provided they do not glaringly transgress specific rules and regulations. Another advantage is likewise derived from this clause: It enables officers at a court-martial, in cases where the offence is manifestly felt but cannot be brought under any specific article, to do justice to the service by punishing the delinquent under an indisputable clause.

To SWINDLE, (*Escroquer*, Fr.) A cant word signifying to cheat; to impose upon the credulity of mankind, and thereby defraud the unwary, by false pretences, fictitious assumptions, &c. This criminal and unmanly practice oftentimes proves successful under the garb of a military dress and character, and sometimes under that of holy orders. The records of Bow-street are filled with pseudo-majors, captains, parsons, &c.

SWINDLER, (*Escroc*, Fr.) A sharper; a cheat. This word is evidently taken from the German *Schwindler*, which, we presume, comes from *Schwindel*, giddiness of thought; giddy pate. See J. J. Eschenburg's English and German Dictionary, Part II. Page 197. With us, however, it signifies a person who is more than thoughtless or giddy. We affix to the term the character of premeditated imposition; so that a swindler comes under the criminal code, and may be prosecuted accordingly. Swindlers almost always assume a military name. Perhaps the army might, in some degree, be rescued from these *pretenders*, were it ordered that no officer shall appear with any military badge unless he be regimentally dressed; and that when so dressed, he shall have the number of his regiment marked upon the button of his hat, &c.

SWING-*tree* of a waggon. The bar placed across the foreguide, to which the traces are fastened.

SWIVEL, (*Pierrier*, Fr.) A small piece of ordnance which turns on a pivot or swivel.

SWIVELS, (*Tourniquets de fer*, Fr.) *commonly called Loop and Swivel, and Guard and Swivel.* Two iron rings attached to a musquet, through which the sling passes.

SWORD. A weapon used either in cutting or thrusting. The usual weapon of fights hand to hand. It also signifies, figuratively, destruction by war; as fire and sword; *à feu et à sang*, Fr.

Broad SWORD. The Spanish and Scots kind, sometimes called a *Back Sword*, as having but one edge: it is basket handled, and three feet two inches long.

Regulation SWORD. The sword which is worn by British officers may be properly called a long cut and thrust.—It is a manifest imitation of the Austrian sword, and has been introduced this war. It is not however, so conveniently used by the British as it is by the Austrians. The latter have it girded round their waists, so that it hangs without any embarrassment to the wearer close to the left hip or thigh; whereas with the British it is suspended in an awkword diagonal manner from a cross belt over the loins, and is scarcely visible in front, except occasionally, when it is drawn, or gets between the officer's legs, and sometimes trips him up when off duty. We could exemplify our ideas upon this subject by various known occurrences, such as the sword being suspended so much out of the grasp of the wearer, that his right hand has appeared to run after the hilt, which has as constantly evaded its reach by the left side bearing it off, in proportion as the right turned towards it; by officers being reduced to the necessity of applying to their serjeants, &c. to draw their swords, &c. but it is not our wish to turn any regulation into ridicule. It is, however, our duty, and the duty of all men who write for the public, to point out practical inconveniences, &c. Perhaps it may not be thought superfluous on this occasion to remark, that the sword ought not to be considered as a mere weapon of offence or defence in an officer's hand; for unless that officer should be singly engaged, which scarcely ever happens upon service, the very notion of personal safety will take his mind off the superior duty of attending to his men.—Officers, in fact, should always bear in mind, that they are cardinal points which direct others. Their whole attention should consequently be paid to their men, and not the slightest idea must interfere with respect to themselves. We are therefore convinced, with due deference to the superior judgment of others, that the swords of infantry officers, and of the staff in general, should be for service, sufficiently long to dress the leading files, &c. and extremely portable. Every officer ought to know the use of his sword, and there should be a fencing-master, or drill swordsman, for every company in the service, who should be armed with sabres or good cut and thrusts.

Position of the SWORD *at open Order.* When an officer stands or marches in front of his company, &c. the position of the sword is diagonal across the chest, with the edge upward. At close order, or when the officer is on the flank of his company, &c. the hilt is close to the right thigh, and the blade in the hollow of the right shoulder, with the edge to the front.—When mounted, he carries it diagonally across the bridle hand.

When troops or squadrons of cavalry advance:—In the walk, the sword is carried with the blade resting on the right arm; in the trot and gallop, the right hand must be steadied on the right thigh, the point of the sword rather inclining forward; and in the charge, the hand is lifted, and the sword is carried rather forward, and crossways in front of the head, with the edge outwards. See *Am. Mil. Lib.*

SWORDSMAN, (*Homme d'épée*, Fr.) This word was formerly used to signify a soldier, a fighting man. But at present it generally means a person versed in the art of fencing. Hence a good swordsman. The French use the terms *Bretteur* and *Bretailleur*. The former is more immediately applicable to a man who wears a sword and piques himself upon the exercise of it: the latter means a person who frequents fencing schools, and often exercises himself in that art.

SWORDED. Girt with a sword.

Sword-*player*. A gladiator; one who fences publicly.

Sword-*belt*. A belt made of leather, which hangs over the right shoulder of an officer, by which his sword is suspended on the left side.

Sword-*bearer*, (*Porte épée*, Fr.) One who wears a sword. It also signifies a public officer.

Sword-*cutler*, (*Fourbisseur*, Fr.) One who makes swords.

Sword-*knot*, (*Nœud d'épée*, Fr.) A ribband tied to the hilt of a sword. All officers should wear sword-knots of a peculiar color and make. They are made of blue silk and gold or silver.

SYCOPHANT. A dirty, mean, groveling creature that sometimes finds its way into the army, and gets to the ear of a superior officer, for the purpose of undermining the good opinion which honest valor and open manhood may have obtained.

SYEF, *Ind.* A long sword.

SYEF-*ul Mulk*, Ind. The sword of the kingdom.

SYMBOL. In a military sense, badge. Every regiment in the British service has its peculiar badge.

SYMBOLE, *Fr.* The French make use of this word in the same sense that they apply *Enseigne*. Symbole means with them, in a military sense, what badge does with us.

SYMMETRY, (*Symmetrie*, Fr.) A word derived from the Greek. True symmetry consists in a due proportion, or in the relation of equality in the height, length, and breadth of the parts, which are required to make a beautiful whole, or in an uniformity of the parts with respect to the whole.

SYRTES or *sables mouvans*, Fr. Quicksands.

SYSTEM, (*Systeme*, Fr.) A scheme which reduces many things to regular dependence or co-operation. This word is frequently applied to some particular mode of drilling and exercising men to fit them for manœuvres and evolutions. Hence the Prussian system, the Austrian system, *the new or mathematical system*, &c.

Military System. Specific rules and regulations for the government of an army in the field, or in quarters, &c.

SYSTEMS, (*Systemes*, Fr.) In fortification, a particular arrangement or disposition of the different parts which compose the circumference of a town or fortified place, according to the original idea or invention of an engineer. The systems best known under this head, and most followed, are those of Vauban, Cohorn, De Ville, Pagan, &c. See Fortification.

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T. The form of a subterraneous arrangement in mining; so called from its resemblance to that letter.

TABAC, *Fr.* Tobacco. During the monarchy of France there was a specific allowance made of tobacco to the cavalry and infantry, when they were in camp, quarters, or garrison. They were likewise supplied by the captains of troops or companies, with a certain quantity whilst on the march from one province or quarter to another.

TABARD, } A herald's coat.
TABELD, }

TABLE, in military affairs, a kind of register to set down the dimensions of carriages for guns, mortars, &c. also for the practice of artillery, charges of mines, &c.

Table *des officiers généraux et principaux*, Fr. Mess or table as directed to be kept for the general and other superior officers of the old French army.

The only military table which is regulated in Great Britain, is at the Horse Guards; and that is charged to the extraordinaries of the army. Good order and discipline are intimately connected with a system of messing. This truth holds good with respect to the soldier, and a regulation is the consequence of its propriety. With regard to the officers it is well known, that in corps where they do not mess, perpetual bickerings among themselves, and occasional obstacles to the service, occur.

The French regulation took place on the 1st of April 1705, and was again renewed, with additional clauses, on the 20th of January 1741, on the 1st of December 1746, on the 17th of February 1753, and on the 9th of March 1757. The curious are referred to a French publication, intitled *Elemens Militaires.*

Before the abolition of the French monarchy, it was usual for officers belonging to the line in that service, to mess together according to their several ranks; the colonel excepted, who had a private table to which he occasionally invited the officers of the corps. A regular roster was kept for this purpose. The lieutenant-colonel and major uniformly messed with the captains; the different tables were generally composed of eight or ten officers of the same rank. The lieutenants dined together; so did the sub-lieutenants; each paying towards the mess in proportion to the receipt of daily subsistence.

Table *de capitaine de vaisseau*, Fr. A mess or table which was regularly provided at the public expence, for the superior officers who served on board.

Table *d'hote*, Fr. An ordinary.

Tenir Table *ouverte*, Fr. To keep open house.

Table *en saille*, Fr. In architecture, a table which juts out of the facing of a wall, or of a pedestal.

Table *fouillee*, Fr. That which instead of being saliant is indented: it is commonly adorned with a border.

Table *d'attente*, Fr. See Rusticated Table.

Crowned Table. In architecture, one which is covered with a cornice, and in which is cut a basso relievo; or a piece of black marble incrustated for an inscription.

Razed Table. In architecture, an embossment in a frontispiece for the putting an inscription, or other ornament in sculpture.

Rusticated Table. In architecture, one which is picked, whose surface appears rough, as in grottoes.

Table. In literature, an index, a repertory, at the beginning or end of a book to direct the reader to any passage in it.

The Round Table. A table to distinguish military merit, which was first invented by king Arthur, who succeeded his father Uther Pendragon, king of the Britons, who was brother to Aurelius Ambrosius, and third son of Constantine. Arthur was the 11th king of England, from the departure of the Romans, and was crowned about the year 516.

Having expelled the Saxons out of England, conquered Norway, Scotland, and the greatest part of France, (where at Paris he was crowned) this monarch returned to his native country, and lived in so great renown, that many princes and knights came from all parts to his court, to give proof of their valor in the exercise of arms. Upon this he erected a fraternity of knights, which consisted of twenty-four, of whom he was the chief; and for the avoiding controversies about precedency, he caused a round table to be made, from whence they were denominated *Knights of the Round Table*. This table, according to tradition, hangs up in the castle at Winchester, where they used to meet at Whitsuntide.

Table *de marbre*, Fr. A marble table. During the monarchy of France, there were two courts of jurisdictions, which were called *Tables de Marbre*, or marble tables; one was that of the constable, and the Maréchaussée or police of France; the other that which gave directions for the general clearing of the forests, and the purifying of stagnant waters. They are so called from the meeting being held round a *large marble table*.

TABLEAU, *Fr*. A description, a catalogue. It likewise signifies a chimney-piece.

TABLETTE, *Fr*. A flat thin stone, which is used to cover the outside of a wall belonging to a terrace, or the border of a bason, &c.

TABLIER, *Fr*. Apron. It likewise signifies an outside cover made for ornament, or to prevent any thing from being damaged by the weather. In the old French army the kettle drums had two of these aprons or covers; one made of damask or sattin, on which were embroidered the arms of the king, or of the general to whom they belonged, and the other of black leather.

Tablier *de pont levis*, Fr. That part of a draw-bridge, which is raised for the purpose of shutting a gate, and to prevent access to it, and upon which persons pass when the bridge is let down.

TABLOUINS, *Fr*. A word used in the artillery. The thick boards or planks that constitute the platform upon which cannon is mounted in battery.

TABOUR,
TABOURET,
TABOURINE,
TABRET.
} A small drum, beat with one stick to accompany a pipe. It was anciently used in war.

TACHE, *Fr*. properly means job, or a regular rate for labor. Workmen are thus hired and paid by the day or by the lump.

TACKLE. The weapon or arrow shot from a bow, was so called by the ancient Welsh.

TACKLES are more particularly used for small ropes running in pullies, the better to manage all kinds of ordnance. See Gin.

TACTICS. A word derived from the Greek, signifying *order*. Tactics consist of a knowlege of order, disposition, and formation, according to the exigency of circumstances in warlike operations. These dispositions are severally made, or one disposition follows another by means of manœuvres and evolutions. Hence the necessity of paying the greatest attention to the first principles of military art; and hence the absurdity and ignorance of some men, who would pass for great and able tacticians, without having grounded themselves in the elements of their professions. As well might a person assume the character of a complete arithmetician under a total ignorance of the first rules.

General tactics are a combination or union of first orders, out of which others grow of a more extensive and complicated nature, to suit the particular kind of contest or battle which is to be given, or supported. Let it not, however, be inferred from this, that evolutions or movements and tactics are one and the same. They are, but there is still a discernable difference between each of them

Tactics (or as the French say, *La Tactique*, tactical art) may be comprehended under order and disposition: an evolution is the movement which is made by one corps among a larger number of corps, and eventually leads to order. Manœuvres consist of the various evolutions which several corps of a line pursue to accomplish the same object. The higher branches of tactics, or *la grande tactique*, should be thoroughly understood by all general officers; it is sufficient for inferior officers and soldiers to be acquainted with evolutions. Not that the latter are not to be known by general officers, but that having already acquired a full knowlege of them, they ought to direct their attention more immediately to the former; carefully retaining at the same time a clear apprehension of every species of military detail, and thereby obviating the many inconveniences and embarrassments which occur from orders being awkwardly expressed to the staff, and of course ill understood by the inferior officer. It may be laid down as a certain rule, that unless a general officer make himself acquainted with particular movements and dispositions, and preserve the necessary recollections, it is morally impossible for him to be clear and correct in his general arrangements. Of all mechanical operations, founded upon given principles, the art of war is certainly the most compendious, the most enlarged, and the most capable of infinite variety. Almost every other science and art are comprehended in it; and it should be the constant object, the chief study, and the ultimate end of a general's reflections. He must not be satisfied with a limited conception of its various branches; he should go deeply into all its parts, be aware of its manifold changes, and know how to adapt movements and dispositions to circumstances and places.

It will be of little use to a general to have formed vast projects, if, when they are to be executed, there should be a deficiency of ground: if the general movements of the army should be embarrassed by the irregularity of some particular corps, by their overlapping each other, &c. and if through the tardiness of a manœuvre, an enemy should have time to render his plan abortive by more prompt evolutions. A good general must be aware of all these contingencies, by making himself thoroughly master of tactics.

The Prussian tactics under Frederic the Great, had for their principal object to concentrate forces, and thereby choose the most suitable points to attack an enemy, not at one and the same time, but one after another; the tactics which have been uniformly pursued by the French, since the commencement of their revolution, have been founded upon the same principles: as well as to apply the method to s
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The musquet, likewise, has a great share in the alteration; the half-pike was entirely laid aside for the bayonet; and in order to have no fire unemployed, it was thought necessary to put it in the power of every soldier to make use of his firelock.

Those are, we think, the two principal causes of the little solidity, or depth given to the battalion.

Thus the defects of the phalanx were multiplied in the European discipline, and its advantages and perfections injudiciously diminished. The system of Prussia, made some alterations, but with every other power until the French revived the principles of the phalanx in their columns of attack, the system was much inferior to the phalanx, and had nothing but the single effect of fire arms to counterbalance all its advantages. The effect, however, of fire-arms is a partial power, and does not originally belong to the manner of disciplining troops, the sole aim of which, should be to employ man's natural action. It is man, therefore, and not his fire, which is to be considered as the principal agent; and from hence the European systems before the French revolution were very much inferior to the phalanx, and still more to the Roman arrangement, which so far surpassed that of Greece.

The light troops of both those people were much heavier than modern battalions, and had more power and solidity for a shock or conflict. However, the Roman discipline, notwithstanding its superiority, is not calculated for our times; because, as we are obliged to engage first at a distance, ours, by its cannon, would destroy the Roman order of battle in a very short time, and would be exposed to a loss much less considerable itself, supposing even the artillery was equal on both sides; we should then, in order to perfect our arrangements, endeavor to procure them all the advantageous qualities of the legionary regulations, as the only means of giving them the superiority.

Many people are of opinion, that we now imitate the Romans, and that we give battle according to their system, because our troops are drawn up in lines, some of which are full, and others vacant. But it is shewn, that three battalions have the same front, and the same inconveniences that eight thousand men ranged in the phalanx order. Our lines are formed by brigades, regiments, or battalions, and the distance of one corps from the other is equal to the front of one of those corps: so that those lines, both full and vacant, are composed of detachments equal in front; each has a phalanx of six, eight, or twelve thousand men. This order of battle consequently, can be no more at most than a kind of medium between those of Greece and Rome.

TACTICS *of Bonaparte.* It is well known that the greater part of the victories of Bonaparte may be imputed to the admirable system adopted by this general, a system which, however often repeated, has still been attended with the same success—a system, to which the established tactics have as yet applied no remedy, or rather, to which the confirmed habits of men, educated in the ancient system, are as unwilling as unable to accommodate themselves.

The minor discipline is his great secret: the simple methods of the first drills, are merely facings and wheelings in a discretionary order, all his rules, are like general principles, the results of which may be produced by a different process of the same elements. All his movements are at rapid time; and the rotation of evolutions, though laid down in regulation, is not pursued in practice, the soldier is taught not so much how to execute a set of movements, as how to perform any that the variety of ground and the incidents of action, never twice alike, call for. These are the elementary rules, on which the system is founded.

His system of action is comprehended in the following principles:

1st. To select some partial point of attack, most frequently the enemy's centre, but occasionally one or other of the wings—and then, strengthening that part of his own army which is opposed to the point of attack, by drafts from the other divisions, to bear down upon the point of attack, with the advantage of numbers, and consequently of greater physical force.

2d. To counteract the effect of the weakness of the other divisions, by assigning them a defensive part only; a purpose which evidently requires a less power than is necessary to attack.

2. By some advantage of position. This is either natural, as a strong position properly so called, or relative, as where the weaker divisions are so placed as either to be protected by the stronger, or, in case of dispersion, to be enabled to fall in with the main body.

3d. The necessary, the inevitable effects of this system are—

That the part of the enemy, which is the point of attack, is almost invariably broken, driven back, in a word, defeated.

That, in the mean time, the weaker divisions of the army which attack, according to this system, are either enabled to maintain their ground, against the strongest wings of the enemy, or they are repulsed.

That, if the divisions maintain the ground, the defeat of their enemy is certain, complete, and irrecoverable.

The main body of the attacking army, having driven before it the point of attack, has now become the rear of those other divisions of the enemy which are contending with its own divisions. The divisions of the enemy are thus between two bodies. The divisions they are in the act of attacking, and the victorious main body, which, having accomplished its own part, is hastening to the relief of its divisions.

That, on the other hand, if the weaker divisions of the attacking army, (attacking according to the system) should happen to be dispersed; confident of their final victory, they exert themselves like conquerors, with the spirit of hope, and courage of assured victory. They dispute the ground, retreat inch by inch, and, if they cannot prevent, still protract their defeat, till the victorious main body shall come to their aid.

Finally, and indeed, most materially, though the weaker divisions of the attacking army should be absolutely defeated, the victorious main body cannot but necessarily recover every thing. The divisions of the enemy, which have succeeded in defeating the divisions of the attacking army, must be equally dispersed by pursuit, as the defeated divisions by defeat. It is, indeed, an essential part of this system, to contrive that they should so be dispersed, by the scattered flight of the divisions defeated. By this means the victorious main body, formed by the exactest discipline to keep their ranks, returning from their pursuit at the word of command, and in the very moment of opportunity have an easy conquest over scattered divisions, which are thus likewise under the circumstance of being placed between two fires.

Such is the celebrated system. Three singular inferences must be deduced from it:—

That, where an army attacks according to this system, the defeat of one part of the army of its enemy is the defeat of the whole.

That the defeat of the smaller divisions by the defending army, is no defeat at all; the defeat, or at least, repulse of these divisions, being one of the means of the victory of the attacking army.

That it is the event of the main attack, and not the repulse or even defeat of the subordinate and merely defensive divisions that should decide the victory.

Maritime TACTICS, or *manœuvres*, *&c. at sea.* Like those practised on land may be considered under two heads. The first contains what the French term *bistorique* or detail, in which are included the orders and signals directed to be observed by fleets going into action; together with a specific account of the different manœuvres which have been executed in the principal engagements. The second comprehends a knowlege of the rates of ships, and of the method of constructing them.

The vessels of the ancients made their way by means of sails and oars. The rows of oars were proportioned to the different sizes, from what was called *unustramus*, which was the smallest, and had only one row; to the *quinque-rami*, which had five rows.

The particular method in which these ships were constructed, as well as of the arrangements that were made within, in order that a sufficient number of rowers might be commodiously placed to work them, is not perfectly known to the moderns; nor have the ancients left us douments sufficiently clear and accurate on that head.

With respect to naval tactics, or the art of fighting at sea, it is confessedly less ancient than tactics on shore, or what is generally called land service. Mankind were accustomed to contend for the possession of territory long before they determined on, or even dreamed of, making the sea a theatre of war and bloodshed.

Setting aside the many fabulous accounts which are extant concerning naval tactics, we shall remain satisfied with what has been transmitted to us by the Roman writers of the Vth and VIth centuries of that republic. We shall there find specific details of the different manœuvres which were practised at sea during the Punic war. In those times naval armaments began to be regularly fitted out; ships of different forms and sizes were constructed, and certain offensive and defensive machines, that served as a species of artillery, were placed upon them. They had already been drawn out according to system; being divided into certain proportions which were then called divisions, but are now named squadrons; and the persons who commanded them, exerted all their skill and genius to gain advantages over their enemies, by opportunely getting to windward, by seizing the favorable occurrence of the tide, or by mooring in advantageous situations.

At the battle of Actium, Augustus finding himself inferior to Mark Antony in the number of his ships, had the sagacity to draw up his line of battle along the entrance of the gulph of Ambracia, and thereby to make up for his deficiency. This naval manœuvre, as well as that of getting to windward of the enemy, in order to bear down upon him with more certainty and effect, exists to the present day.

We act precisely upon the same principles in both cases, by which the ancients were governed, with the additional advantage, in fighting to windward, of covering the enemy's line with smoke from the discharge of ordnance and firearms. The French call this being in possession of the closest line—*Occuper la ligne du plus près*.

In those times, ships were boarded much sooner than they are at present. Most engagements at sea are now determined by cannon shot. Among the ancients, when two ships endeavored to board each other, the rowers drew in their oars, to prevent them from being broken in the shock.

The manœuvre which was practised

on this occasion, was for the ship that got to windward of its adversary, to run upon its side, with the prow, which being armed with a long sharp piece of iron, made so deep an impression in it, that the ship thus attacked, generally sunk. The voyages which were afterwards made on the ocean, rendered it necessary to construct ships that carried more sail, and were double decked; and since the invention of gunpowder, tiers of guns have been substituted in the room of rows of oars.

On the decline and fall of the Roman empire, the Saracens got the ascendancy in naval tactics. They took advantage of this superiority, and extended their conquests on all sides. The whole extent of coast belonging to the Mediterranean, together with the adjacent islands, fell under their dominion. Mankind are indebted to them for considerable improvements in naval tactics.

It was only under Charlemagne that the Europeans may be said to have first paid any great attention to their navy. That monarch kept up a regular intercourse with the caliphs of the East; and having just grounds to apprehend an invasion from the Normans, he constructed vessels for the defence of his coasts.

During the reign of the first French kings, belonging to the third race, naval tactics were little attended to, on account of the small extent of maritime coast which France possessed at that period. It was only in the days of Louis the Younger, and of Louis, surnamed the Saint, that we discover any traces of a considerable fleet; especially during the crusades.

Under Charles the Vth, and his successor Charles the VIth, the French got possession of several sea-ports, and had command of a long line of coast. Yet neither they nor the English, with whom they were frequently at war, had at that period any thing like the fleets which are fitted out now.

The discovery of America by Columbus, and the more lucrative possession of the East Indies, induced the principal states of Europe to encrease their naval establishments, for the purpose of settling colonies, and of bringing home, without the danger of molestation, or piracy, the wealth and produce of the Eastern and Western worlds.

The French marine was far from being contemptible under Francis the first; but it grew into considerable reputation during the administration of cardinal Richelieu, in the reign of Louis the XIIIth; and continued so until the battle of La Hogue. From that epoch it began to decline; while the English, on the other hand, not only kept up the reputation they had acquired under Cromwell and his predecessors, but rendered themselves so thoroughly skilled in naval tactics, that they have remained masters of the sea to this day. In corroboration of what we have advanced, we refer our readers to a history of the Sovereignty of the Ocean, by the American editor of this work.

TACTIQUE *Maritime*, Fr. Naval tactics, or sea manœuvres, &c. See NAVAL TACTICS.

TAGBEERE, *Ind.* Dismission.

TAIGAU, *Ind.* A sabre.

TAIL *of the trenches.* The post where the besiegers begin to break ground, and cover themselves from the fire of the place, in advancing the lines of approach.

TAILLE *du soldat*, Fr. The size, height, and stature most proper for a soldier.

TAILLER, *Fr.* To cut. *Tailler en pièces*, to cut to pieces.

TAILLOIR, *Fr.* Trencher. It likewise signifies in architecture a square piece of stone, or wood which is placed above the capital.

To TAKE. This verb, as Dr. Johnson observes, like *prendre* in French, is used with endless multiplicity of relations. Its uses are so numerous, that they cannot easily be exemplified; and its references to the words governed by it so general and lax, that they can hardly be explained by any succedaneous terms. But commonly that is hardest to explain which least wants explanation. We shall content ourselves with giving a few general terms, in which the verb *take* is used with respect to military matters.

To TAKE. To make prisoner.

To TAKE *advantage of.* To avail oneself of any peculiar event or opening, whereby an enemy may be overcome, viz.—He took advantage of the debaucheries which were daily committed in the enemy's camp, to surprise the army.

To TAKE *ground to the right or left.* To extend a line towards either of those directions.

To TAKE *up quarters.* To occupy locally; to go into cantonments, barracks, &c. To become stationary for more or less time.

To TAKE *up the gauntlet.* The correlative to throw down the gauntlet. To accept a challenge.

To TAKE *up arms.* To embody and troop together for offensive or defensive purposes. We likewise say, to take arms.

To TAKE *down.* To minute; to commit to paper what is spoken or given orally. Hence to take down his words.

To TAKE *the field.* To encamp. It likewise means generally to move with troops in military order.

To TAKE *in.* A low phrase, signifying to cheat, to gull. Officers, especially the junior classes, are frequently *taken in.*

To TAKE *oath.* To swear.

To TAKE *up.* To seize; to catch; to arrest; as to take up a deserter.

To TAKE *on*. An expression in familar use among soldiers that have enlisted for a limited period, to signify an extension of service by taking a fresh bounty.

To TAKE. To adopt any particular formation:

Rear ranks take open order } Words of
Rear ranks take close order } command

which are used in the discipline of troops. For the manner in which they are executed see ORDER.

To TAKE *cognizance*. To investigate with judicial authority.

TALC, (*Talc*, Fr.) In natural history, a shining, squamous, fissile species of stone, easily separable into thin lamina or scales, improperly called Isinglass

There are two kinds of talc, viz. the white talc of Venice, and the red talc of Muscovy.

TALE. Information; disclosure of any thing secret.

TALE, *Ind*. An Indian coin equal to six shillings and eight pence.

TALEBEARER. One who gives officious or malignant intelligence. With respect to the interior economy of military life, a talebearer is the most dangerous creature that could insinuate itself among honorable men; and however acceptable domestic information may sometimes seem to narrow minds, it will be found even by those who countenance the thing, that such means of getting at the private sentiments of others, not only defeat their own ends, but ultimately destroy every species of regimental harmony. The only way to secure a corps from this insidious evil, is for commanding officers to treat those with contempt, who would endeavor to obtain their countenance by such base and unofficer-like conduct. For it is a known axiom, that if there were no listeners, there would be no reporters.

TALENT. Count Turpin, in his essay on the Art of War, makes the following distinction between genius and talent:—Talent remains hidden for want of occasions to shew itself; genius breaks through all obstacles: genius is the contriver, talent the workman in military affairs. Talent is properly that knowlege acquired by study and labor, and ability to apply it; genius takes, as by intuition, a glance of whatever it is occupied on, and comprehends at once without labor the true character of the subject; genius must however not be devoid of acquired knowlege.

TALK. The Indian tribes of the United States, on public occasions, such as treaties, depute persons to deliver discourses to those with whom they treat, and those discourses are called TALKS: they often abound with eloquence.

To TALK. To make use of the powers of speech. Officers and soldiers are strictly forbidden to talk under arms.

TALLOW. A well known name for the fat of animals. It is used as a com-

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to keep off the wind, &c. by means of folding doors. In many instances it is the same as porch.

Tambour, *Fr.* See Drum.

Marcher tambours *battans et drapeaux flottans.* To march with drums beating and colors flying.

Tambour, *Fr.* See Drummer. We frequently use the word Drum in the same sense that the French do, viz. to signify drummer. We likewise say fife for fifer; as, one drum and one fife to each company.

Tambour *major*, Fr. Drum major.

Batteries de Tambour, *Fr.* The different beats of the drum. The principal beats among the French are—*La générale*, the general; *L'assemblée*, the assembly; *Le dernier*, the last beat; *Le drapeau*, the troop; *Aux champs*, to the field; *La marche*, the march; *La diane*, the revellie; *L'alarme*, to arms, or the alarm; *La chamade*, the parley; *L'appel*, the roll or call; *La fascine ou brelogue*, the workman's call. *Le ban et la rétraite.*

Aux champs, ou le premier, is beat when any particular corps of infantry is ordered to march; but if the order should extend to a whole army, it is then called *La générale*, the general. They do not make this distinction in the British service, but omit the *premier* or first beat when one regiment, detachment, or company, marches out of a camp or garrison where there are other troops.

Le second, ou l'assemblée, is to give notice that the colors are to be sent for.

La marche is beat when troops march off their parade.

Battre la charge, ou battre la guerre. To beat the charge, or the point of war. This occurs when troops advance against an enemy. This beat may be conceived by repeating in seconds of time the sound —*bom! bom! bom! bom! Battre la rétraite* is to beat the retreat, to cease firing, or to withdraw after the battle. It is likewise used in garrisons to warn soldiers to retire to their quarters.

Battre la fricassée. To beat the long roll. A beat which is practised to call soldiers suddenly together.

Battre la diane. To beat the reveille. This is done in a camp or garrison at break of day. When an army besieges a town, the reveille is confined to those troops belonging to the infantry that have mounted guard, particularly in the trenches; and it is then followed by the discharge of those pieces of ordnance which had ceased firing on account of the darkness of the night, that prevented their being properly pointed against the enemy's works.

Tambour *de basque*, Fr. A tabor.

Tambour *battant*, Fr. Drums beating.

Sortir Tambour *battant, enseignes déployées*, Fr. To go out drums beating and colors flying.

Tambour in architecture. A term applied to the Corinthian and composite capitals, as bearing some resemblance to a drum, which the French call *Tambour*.

Tambour likewise denotes a round course of stone, several whereof form the shaft of a column not so high as a diameter.

Un TAMBOURIN, *Fr.* A timbrel.

TAMBOURINE. A drum, somewhat resembling the tabor, but played in our military bands without either stick or pipe.

TAMIS, *Fr.* A sieve.

TAMPIONS, or } are wooden cylin-
TOMPIONS, } ders to put into the mouth of the guns, howitzers, and mortars, in travelling, to prevent the dust or wet from getting in. They are fastened round the muzzle of the guns, &c. by leather collars.

They are sometimes used to put into the chambers of mortars, over the powder, when the chamber is not full.

Tampions, in sea-service artillery, are the iron bottoms to which the grape-shot are fixed, the dimensions of which are as follows, viz.

	Diameter.
42 pounders,	6 6-10ths inches.
32 ditto	6
24 ditto	5 4-10ths
18 ditto	4 9-10ths
12 ditto	4 3-10ths
9 ditto	3 9-10ths
6 ditto	6 3-4ths
4 ditto	2 9-10ths
1½ ditto	2 1-10th
½ ditto	1 4-10ths

TAMPON, *Fr.* A wooden peg or instrument which is used to plug up cartridges, petards, &c. A stopper.

TAMPONS, *Fr.* In mason-work are wooden pegs by which beams and boards for floors are fastened together.

Tampons, *Fr.* Flat pieces of iron, copper, or wood, which are used by the French on board their men of war, to stop up holes that are made by cannon-balls during a naval engagement.

Tampons *de canon*, Fr. The apron made of cork or lead, which is put over the vent of any piece of ordnance.

TANGENT, (*Tangente*, Fr.) In trigonometry, is a right line raised perpendicularly on the extreme of the diameter, and continued to a point, where it is cut by a secant, that is, by a line drawn from the centre, through the extremity of the arch, whereof it is the tangent.

Tangent. See Gunnery.

Tangent *scale.*—·21 of an inch is the tangent of 1 degree to every foot of a gun's length, from the base ring to the swell of the muzzle: Therefore, if the distance in feet, between these two points be multiplied by ·21, the product will be the tangent of 1 degree; from which the dispart being subtracted, will give the length of the tangent scale above the base ring for one degree of elevation for that particular gun. If the scale is to be applied to the quarter sight of the gun, of course the dispart need not be subtracted:

Tangent of one degree to the following British ordnance.

	Length.		Tangent, 1°	Dispart.
	Ft.	In.	In.	In.
12 pr. medium	6	6	1·365	1·475
12 pr. light	5	—	1·05	1·
6 pr. heavy	7	—	1·47	1·32
6 pr. light	5	—	1·05	1·
3 pr. heavy	6	—	1·26	1·08
10 inch howitzer	3	11½	·84	—
8 do. —	3	1	·64	—
5 1-2 do. light	2	2½	·47	—
4 2-5 do.	1	10	·384	—

Tangent of one degree to the following French guns.

Kind.	Siege						Field.					
	Tangent of 1°			Dispart.			Tangent of 1°			Dispart.		
	in.	li.	p.	in	li	p	in.	li.	p.	in	li	p
24 pr.	2	1	5	1	2	4		—			—	
16 —	2	-	-	1	1	-		—			—	
12 —	1	10	6	1	-	-	1	4	-	1	3	2
8 —	1	8	3	1	-	-	1	2	½	1	2	-
4 —		—			—		1	-	-	1	-	-
6 in. how'r.		—			—		0	5	6		—	

As the French tangent scales are marked off in inches and lines, the above dimensions are given in the same, for the more ready turning the French elevations into degrees, and thereby comparing their ranges with the English.

TANK, *Ind.* A pond or pool of water. A reservoir to preserve the water that falls in the rainy season.

TANNADAR, *Ind.* A commander of a small fort, or custom house.

TAP. A gentle blow, as a tap of the drum.

TAPABORD, *Fr.* A sort of cap or slouched hat made in the English fashion which the French sailors wear. Its sides hang over the shoulders, and shield them from rain in wet weather. It likewise signifies a riding-cap, a montero.

TAPE-*cul*, Fr. That part of a swipe or swinging gate which serves to raise and let down a draw-bridge.

TAPE-*cu*, Fr. A falling gate.

En TAPINOIS, *Fr.* Slyly, secretly.

Se TAPIR, *Fr.* To lie squat.

TAPIS, *Fr.* This word literally means carpet, and is used by the French in a figurative sense, viz.

Amuser le TAPIS, *Fr.* To trifle.

Mettre une affaire sur le TAPIS, *Fr.* To open any particular transaction, to move a business.

La TAPE, *le* TAPON, *ou* TAMPON, *Fr.* The tampion.

TAPER *ou* TAMPONNER *un Canon*, Fr. To put in the tampion. *De taper un Canon*, Fr. To take out the tampion.

TAPPEE, *Ind.* The post letter carrier on the coast of Coromandel. An express.

TAPROBANE, *Ind.* The ancient name for the island of Ceylon. It is derived from *tapoo* an island, and *bany*, a ferry.

TAP-TOO.
TAT-TOO. } See DRUM.

TAR. A kind of liquid pitch used in the composition of some sorts of fireworks.

TAR and FEATHERS. A method of punishment invented in the American revolution, which consisted in pouring a bucket of tar over the head of the culprit, and loosing a bag of feathers over it. See the poem of *M'Fingal.*

TARANTHE, *Fr.* A thick iron peg which is used to turn the screw in a press.

TARAU, *Fr.* An instrument which is used in making the nut of a screw. It is a round piece of steel with a spiral shape.

TARAUDER, *Fr.* To make a hole like that which is effected by the operation of the *Tarau.*

TARE, *Fr.* A word adopted by the French from the English term Tar.

TAREAU, *Fr.* A screw-tap.

TARGE, *Fr.* See TARGET. It is generally pronounced *Targue*, from whence is derived the figurative expression *Se targuer*, to plume one's-self, or to be self-sufficient. *Le poltron se targue du courage de son père*—The coward plumes himself upon the courage which his father possessed.

TARGET, a sort of shield, being originally made of leather, wrought out of the back of an ox's hide.

TARGET, is also a mark for the artillery, &c. to fire at in their practice.

TARIERE, *Fr.* Auger, wimble, gimlet. The French make a distinction with respect to the gender of this word. When they express a large sized auger or wimble, they say, *Un gros Tarière*, making it masculine, and when they mean a small sized one, they say, *Une petite tarière*, making it feminine.

TARIERE, *Fr.* Likewise signifies a miner's tool with which he bores into the earth. It is used to force a lighted match into the chamber of a countermine, and to make it explode.

TARPAULINGS, are made of strong canvas, thoroughly tarred and cut into different sizes, according to their several uses in the field; such as to cover the powder-waggons and tumbrels (carrying ammunition) from rain: each field-piece has likewise one to secure the ammunition-boxes.

To be TARRED. A cant word used among soldiers to signify the punishment which privates undergo among themselves, when they have been tried and sentenced by their own comrades.

TARTARES, *Fr.* A word used in the French army to distinguish officers' servants and batmen from the soldiers that serve in the ranks. *Tartare* likewise means a groom.

TARTARS, (*Tartares*, Fr.) Asiatics, whose principal arms are the bow and arrow, and sabre or pike. Some few have firelocks and pistols.

Calmuc TARTARS. A free people inhabiting the borders of the Caspian Sea, and the banks of the river Wolga. They are under the immediate protection of Russia, and in consideration of the security they enjoy, they are obliged to serve when called upon. They consist of wandering hordes, live in tents, and are armed with bows and arrows. Some have rifle guns, with one or two pistols. But they are extremely cruel, and worse disciplined than the Cossacks.

TARTES, *Fr.* Bogs.

TAS, *Fr.* A heap. When the works of a fortification are lined with turf and fascines, &c. small beds of earth are previously prepared and laid one over another, till the necessary thickness is obtained; when completed it is called *Tas de gazon* ou *de placage*. A heap of turf or a placage, which see. *Tas* is likewise used in a sense of contempt to signify a croud—*Un tas de fainéans.* A heap or croud of parasites.

Un TAS *de mensonges.* A heap of lies.

TASA, *Ind.* A kind of drum, formed from a semisphere of copper, hollowed out and covered with goat skin. It is hung before from the shoulders, and beat with two rattans.

TAS *de charge*, Fr. An arch made in a particular manner. It is generally found in Gothic buildings.

TASSEAU, *Fr.* A small anvil. It likewise signifies a bracket.

TASSES. Armor for the thighs, so called.

TASSETTE, *Fr.* A tass in armor.

TATTEE, *Ind.* A bamboo frame; which encloses an herb called jawassea or kuskus. Frames of this sort are made to put to the different openings of a room; they are shaped like a sash, and one being laid on a floor and covered with the kuskus grass, the other is laid upon it, and the two are tied together at the angles, which correspond with the panes; by throwing water against them, the hottest wind in passing through becomes cool, and the air is made fragrant by the kuskus.

TAUGOUR, *Fr.* A small lever which is used for various purposes.

TAUPINS, *Francs-Taupins*, Fr. A name which was formerly given to a body of free-archers, or Francs-archers, in France. This body consisting chiefly of countrymen and rustics, they were probably so called from *taupe*, a mole; of which there are great quantities in the fields. Taupin likewise signifies swarthy.

TAX. A tribute or duty rated on land, &c.

TE, *Fr.* A term used among miners to express a figure which greatly resembles the letter T, and which consists of a certain arrangement and disposition of the furnaces, chambers, or lodgments that are made under any particular part of a fortification, in order to blow it up. The Té has four lodgments; the double Té has eight; and the triple Té has twelve.

TECHNICAL, (*Technique*, Fr.) All terms, or words which have been invented for the purpose of expressing particular arts, are called *technical.*

Mots TECHNIQUES, Fr. Technical words.

TE DEUM. As far as it concerns *military matters*, is a religious hymn sung in thansgiving for any victory obtained.

TEEP, *Ind.* A contract or note of hand.

TEFTERDAR *Effendi.* The commissary general is so called among the Turks.

TEINT, *Teinte*, Fr. In painting, an artificial or compound color, or the several colors which are used in a picture, considered as more or less, high or bright, or deep or thin, or weakened, &c.; to give the proper relievo, or softness, or distance, &c. of several objects.

TEINT, *which is used to draw a plan, Teinte dont on se sert pour lever un plan*, Fr. Teint, in a general acceptation of the word, means any shade that is given to an object which is raised from the canvas, paper, &c. and placed in perspective.

TELAMONES. A term used in ancient architecture, to express the figures of men supporting entablatures, and other projections, the same as *Cariatides.*

TELESCOPE, (*Télescope*, Fr.) An optical instrument, composed of lenses, by means of which remote objects appear as if near at hand. The telescope was invented by Galilæo.

TELINGHI, *Ind.* The mountaineers on the Coromandel coast are denominated *Telinghis;* which is also the name of their nation, language or dialect.

To TELL *off.* A term used in military formations, to designate the relative proportions of any given body of men. Thus a battalion may be told off into wings, grand divisions, divisions, companies, platoons, half platoons, sub-divisions, and sections. It is the peculiar duty of every adjutant, and serjeant major to be particularly expert at telling off. Squadrons of horse are told off by half squadrons, divisions, sub-divisions, ranks of threes, and files right and left. But all troops, whether infantry or cavalry, should be accustomed to *tell themselves* off; that is to move off at the word of

TEMOIN, *Fr.* A witness. It likewise signifies the second in a duel.

Temoins, *Fr.* In civil and military architecture, are pieces of earth left standing as marks or witnesses in the fosses of places which the workmen are emptying, that they may know exactly how many cubical fathoms of earth have been carried.

TEMPER. A state of steel or other metal, that best fits it for the use to which it is to be applied. Thus, the blade of a sword should be so tempered as to admit of considerable flexure without breaking, yet so elastic as to return to its shape, on the pressure being removed.

To Temper. In a military sense, to form metals to a proper degree of hardness.

TEMPEST, (*Tempête*, Fr.) According to Dr Johnson, the utmost violence of the wind: the names by which the wind is called according to the gradual increase of its force seem to be, a breeze; a gust; a gale; a storm; a tempest.

TENABLE, (*Tenable*, Fr.) Such as may be maintained against opposition; such as may be held against attacks.

TENAILLE, *Fr.* (This word literally means *shears.*) A military evolution which was performed in the times of the ancients.

A phalanx, attacked by a lozenge or triangular wedge, bent its right and left forward by a half-quarter wheel each wing on their common centre; and when they found themselves opposite the sides of the enemy's arrangement, they each marched on their own side, perpendicular to their line; by which means they both inclosed and attacked the enemy together, at the same time, while the head was engaged and at blows with the centre of the phalanx that had kept its ground. Such is the description authors have left us of the design and effects of this manœuvre.

The tenaille had considerable advantage over the triangular wedge; but, according to Chevalier Folard, it was not equally efficacious against the column. The latter could alter the direction of its march, and fall upon one of the wings, whether in motion or not, or detach the section of the tail or rear to take its wings in flank, while it was occupied in making the quarter conversion. The column and *tenaille* were formed for acting against each other, and could only be victorious over one another by the superior abilities of their commander. However, the column was always exposed to less danger than the *tenaille*, for the latter could not pursue the column without changing its order; whereas the column must destroy, and in a manner annihilate the *tenaille*, in case it should once break it.

The tenaille is unquestionably an excellent manœuvre, and strictly conform- sometimes made use of in war without being sensible of its advantages; turning a flank with a longer line, is in fact the *tenaille*. This, however, does not hinder the manœuvre from being well performed; for the nature of ground not being level like a sheet of paper, the commander in ranging his troops, according to the advantages of the situation, does not form a perfect *tenaille*, such as may be drawn or sketched out, but one of an irregular kind, which produces the same effects; and this is what should be sought on all occasions. This order is also called a *potence*.

Tenailles, in fortification, are low works made in the ditch before the curtains. There are three sorts: viz. the first are the faces of the bastions produced till they meet, but much lower; the second have faces, flanks, and a curtain; and the third have only faces and flanks.

Single Tenaille, (*Tenaille simple*, Fr.) is a work whose front is advanced towards the country, having two faces, forming a re-entering angle: its two long sides terminate on the counterscarp, opposite to the angle of the shoulder.

Double Tenaille (*Tenaille double*, or *flanquée*, Fr.) is a work whose front, having 4 faces, forms 2 re-entering, and 3 salient angles: its long sides are likewise parallel, and terminate on the counterscarp, opposite to the angle of the shoulder. Both the single and double tenailles have this fault, viz. that they are not flanked or defended at the re-entering angle, because the height of the parapet hinders the soldiers from discovering before that angle. Therefore tenailles should only be made when there is not room enough to make horn-works. The ramparts, parapets, ditches, covert-way, and glacis of tenailles, are the same with other out-works.

Tenaille *of a place*, is what is comprehended between the points of two neighboring bastions; as the faces, flanks, and curtains. Hence it is said, the enemy attacked the whole tenaille of a place, when they made two attacks on the faces of the two bastions.

Tenailles, *Fr.* Pincers, nippers, sheers, tenails.

TENAILLER, *Fr.* To tear off the flesh with red hot pincers. This punishment existed in civilized Europe, until the French revolution.

TENAILLON, *Fr.* This is sometimes called among the French *grande lunette*. It is a work composed of two parts, each of which covers the faces of the half-moon; in whose front the tenaillon is constructed.

Un Tenaillon, *Fr.* A little tenaille. See Fortification.

TENDELET, *Fr.* An awning; such

as is used on board of ship, and over carriages, in hot countries.

TENDRE, *Fr.* To stretch; to spread. This word has various significations in the French language. In military matters, it is common to say,

Tendre *un piège à quelqu'un*, Fr. To lay a snare for any body.

Tendre *une marquise*, *une tente*, Fr. To pitch a marquee, a tent.

TENIR, *Fr.* To hold, to keep, &c.

Tenir *tête à quelqu'un*, Fr. To cope with any body.

Se tenir, *Fr.* To remain; to stay; to hold fast.

Se tenir *bien à cheval*, Fr. To sit well on horseback, to have a good seat.

TENON, (*Tenon*, Fr.) Any thing that holds or keeps fast; that part of a frame work which is cut to fit a mortise.

Tenon *d'arquebuse*, Fr. Loop of a gun.

TENT, (*Tente*, Fr.) This word is originally derived from the Latin *tendo*, I stretch; whence *tendre*, to stretch. A soldier's moveable lodging place, commonly made of canvas, and extended upon poles.

The sizes of the officers tents are not fixed; some regiments have them of one size, and some another. A captain's tent and marquee should be 10 1-2 feet broad, 14 deep, and 8 high: those of the subalterns are a foot less: the major's and lieutenant-colonel's, a foot larger; and the colonel's 2 feet larger.

The subalterns lie two in a tent, those of engineers but one.

The tents of private men should be 6 1-2 feet square, 6 feet high, and hold 5 soldiers each.

The tents for the horse seven feet broad, and 9 feet deep: they hold likewise 5 men and their horse accoutrements.

Common Infantry Tent. Length of ridge pole is 7 feet; length of standards 6 feet. They hold only 5 men each. Weight complete 27 lbs. Great alterations have taken place in tents since the French revolution.

Bell Tent. This was the name of a small tent that was formerly in use, also called a tent of arms, being used only for holding arms in the front of the line; the use of it is now exploded; and the form being given to those now used for infantry or cavalry; weight, complete with poles, 43 lbs. length of pole 9 feet, contain 12 men each, require 40 pegs.

Marquee. Weight complete, 1 cwt. 17lbs. ridge pole 9 feet; standard 8 feet.

Round Tent. A circular tent which contains 12 men; the weight complete, with poles, 43 lbs. Length of pole 10 feet

Hospital Tent. A large commodious tent, which is appropriated for the sick. It sometimes happens, that when a contagious disorder breaks out in a camp, or in barracks, the persons infected are removed from the hospital and lodged in a tent, which is pitched for that purpose in the neighborhood It is usual for the commanding officer of the regiment to order one or more sentries to be furnished to the regimental hospital, and the same to the hospital tent, which sentries are directed to permit no person to enter but those concerned in the hospital, the staff, and officers of the regiment. They are to be particularly careful in preventing liquor, or any thing improper, from being carried into the hospital; nor are they to permit any patient to go out (to the necessary excepted) without a ticket of leave from the attending surgeon

Laboratory Tent, in artillery, a large tent which is sometimes carried to the field for the convenience of fire-workers and bombardiers. The weight complete, with poles, pins, &c. 3 cwt. 24 lbs. length of ridge pole 18 feet, length of poles 14 1-2 feet.

Tent *bedstead.* A small portable bedstead, so contrived as to correspond with the shape of an officer's tent.

Tent-*Pins*, pieces of wood, which are indented at the top, and made sharp at the bottom, to keep the cords of a tent or marquee firm to the earth. There are four large ones which serve for the weather cords.

Tent-*Poles.* The poles upon which a tent or marquee is supported.

Tent *walls.* See Wall.

Tent likewise means lint to put in a wound.

TENTED. Having tents pitched on it. Hence "the tented field."

TERRAIN, *Fr.* This word is sometimes written *terrein*, and signifies, generally, any space or extent of ground.

Gagner du terrain *peu-à-peu*, Fr. To gain ground little by little.

Perdre du terrain, Fr. To lose ground.

Menager son terrain, Fr. To make the most of your ground It is likewise used in a figurative sense, viz. *Un homme est fort quand il est sur son terrain*, Fr. A man always speaks with great confidence when he is thoroughly master of the subject.

Terrain *du camp*, Fr. The ground within the lines of encampment.

Lever le Terrain, *Fr.* To reconnoitre, to take a survey of ground.

Chicaner le Terrain, *Fr.* To dispute the ground; to fight it inch by inch.

Tenir un grand Terrain, *Fr.* To take up much ground.

TERRASS. See Mortar.

TERRASSE, *Fr.* Terrace, platform.

Contre-terrasse, *Fr.* A terrace that is raised above another.

TERRASSER, *Fr.* To throw down, to rout completely.

TERRASSIER, *Fr.* This word is used among the French not only to signify the person who undertakes to heaps of earth removed, &c. for any cific purpose, but likewise the man who actually carries it.

TERRE, *la* TERRE, *Fr.* Earth, the earth.

TERRE-PLEIN, *Fr.* See FORTIFICATION.

TERRER, *se Terrer*, Fr. To hide under ground. The French say, *des gens de guerre se sont bien terres;* meaning thereby, that they had thrown up entrenchments with earth, so as to be covered from the enemy's fire. *Terrer une artifice*, to cover the head of any fire-work with earth.

TERRES-*Amendees*, Fr. Earths that have been used in the cleansing of saltpetre. Saltpetre-men call these earths *Terres reanimees*.

TERREUR, *Fr.* Fear, apprehension.

TERREUR *panique*, Fr. See PANIC.

TERTIATE, in gunnery, is to examine the thickness of the metal of a piece of artillery, in order to judge of its strength. This is usually done with a pair of calliper compasses.

TERTIATING *a piece of ordnance*, is to find whether it has its due thicknes, at the vent, trunnions, and neck; if the trunnions and neck are in their due order, and the chase straight, &c.

TERTRE, *Fr.* A small rising ground that stands unconnected with any other.

TESSONS, *Fr.* Potsherds.

TESTAMENT *Militaire*, Fr. Among the French, a will which is made in the presence of two witnesses only, and is not committed to paper.

TESTIMONY. Verbal declaration given upon oath or honor before any court martial. The testimony of a witness should neither be influenced nor interrupted, and the precise words used by him should be written down in the proceedings without any alteration.

TESTUDO, in the military art of the ancients, was a kind of cover or screen, which the soldiers of each company made themselves of their bucklers, by holding them up over their heads, and standing close to each other. This expedient served to shelter them from darts, stones, &c. thrown upon them, especially those from above, when they went to the assault.

TESTUDO, was also a kind of large wooden tower, which moved on several wheels, and was covered with bullocks' hides: it served to shelter the soldiers when they approached the walls to mine them, or to batter them with rams.

TETE, *Fr.* Head.

TETE *du Camp*, Fr. The head of the camp, or the front ground which looks towards the country; and where troops bivouac

TETE *de la Sappe*, Fr. Head of the sap.

TETE *de Chevalement*, Fr. A cross beam which lies upon two upright stays, and supports any part of a wall, &c. whilst it is in repair.

Faire (*ou tenir*) TETE *à quelqu'un*, Fr. To oppose a person; to keep him at bay.

Avoir quelqu'un en tête, Fr. To have any person opposed to one, viz. *Turenne avoit en Tête Montecuculli;* Turenne was opposed by Montecuculli.

TETES, *Fr.* In the plural number, are the same as men or lives, viz. *La prise d'une place a coute bien des Tetes*—The reduction or taking of a place has cost many lives or men.

Avoir la Tete de tout, Fr. To be the most advanced.

TETE *de Pont*, Fr. That part of a bridge which is on the enemy's side.—When the bridge is fortified on both sides, the French say, *Les deux tetes de pont.*

TETE *de Porc*, Fr. This word means literally a hog's head. It is used to denote a military arrangement of the triangular kind. Those mentioned under the term wedge, were composed of ranks, greater one than another, in a regular progression from the incisive angle to the base. The tete de porc was formed of small bodies ranged in lines in the same sense, and in the same progression as the ranks in the preceding wedges; that is to say, a small body (probably square) was placed at the head, another of the same size was posted behind it, having two others, one on its right, the other on its left, both extending the full length of their front beyond the wings of the first. Behind those three, five others were ranged in the same order, and so on successively until all were placed.

This arrangement is equal to the former (viz. that of the wedge) with regard to defects; as to advantages it has but one only, which will never be of weight enough to gain it any degree of reputation; it is this, that being composed of small bodies, each having its leader or commander, all the different parts are more or less capable of defence should they be attacked at the time they are forming or dividing; and if the enemy attempted to form the *Tenaille*, they might detach some of those small bodies to interrupt their motions, or to attack them in flank.

This disposition corresponds with the movement by echellons from the centre, or both wings thrown back; it is in the modern mode a most imposing and important disposition, where the force that uses it is inferior in number, and well disciplined to rapid evolution.

TETHER. A string by which horses are held from pasturing too wide. We say, figuratively, to go the length of one's tether; to speak or act with as much freedom as circumstances will admit.

TETRAEDRON, (*Tetraëdre*, Fr.) In geometry, one of the five regular bodies. It is a pyramid which is terminated by four equilateral triangles, that are equal to each other; in the same manner that the tetragon is a recontillneal figure of four equal sides, which has four right angles.

TETRAGONAL. Square, having equal sides and angles.

TETRARCH. A Roman governor of the fourth part of a province.

TEUTONIC, (*Teutonique*, Fr.) See ORDERS.

TEVEEL, *Ind.* The treasury.

TEVEELDAR, *Ind.* The treasurer.

THANE. An ancient military title of honor, now obsolete.

To THANK. In military matters, to make honorable mention of a person or persons for having behaved gallantly in an action, or otherwise rendered a public service.

To be THANKED. To receive a public testimony of good conduct. Officers, &c. are generally thanked in public orders.

THANKS. Public acknowlegements for gallant actions.

Vote of THANKS. It has been customary in all civilized countries for the legislature to pay a public tribute of applause to those warriors who have fought their country's battles with success, and have otherwise distinguished themselves by particular feats of gallantry and good conduct. The French, during the progress of their revolution, have had frequent recourse to this mode of adding new zeal and fresh courage to their armies, and of expressing national gratitude.

THEATRE *of war.* Any extent of country in which war is carried on may be so called. The French say *Théatre de la guerre.* It signifies the same with us as seat of war. According to Turpin, page 21, in his essay on the Art of War, there are but three sorts of countries which may become the theatre of war; an open country divided by rivers, a woody, or a mountainous one. The dispositions for a march must of course be varied as the situation of places differ.

THEODOLITE. A mathematical instrument useful to engineers and artillerists, in taking heights and distances.

THEOREM, (*Théoreme*, Fr.) In mathematics, a proposition which is purely speculative and tends to the discovery of some hidden truth.

An universal THEOREM, in mathematics, is one that extends universally to any quantity without restriction; as that the rectangle of the sum, and difference of any two quantities, is equal to the difference of their squares.

A particular THEOREM is when it extends only to a particular quantity.

A negative THEOREM is one that demonstrates the impossibilities of an assertion, as that the sum of two biquadrate numbers cannot make a square.

A local THEOREM. That which relates to surface; as the triangles of the same base and altitude are equal.

THEORETICAL, (*Théorique*, Fr.) What appertains to theory.

THEORY, (*Théorie*, Fr.) The speculative part of any particular science, in which truths are demonstrated without being practically followed. Or more distinctly; a theory is an opinion formed in the mind, that certain effects must arise from certain combinations of matters or circumstances; the matters or circumstances being known, the result or consequence not yet demonstrated by experiment.

School of THEORY. In order to secure to the army intelligent and well informed officers, it has been wisely suggested, that there should be a school of military theory in each regiment. The persons selected for this purpose are to pass an examination before competent persons, whenever the vicinity of regimental quarters will allow them to attend.

Order of MARIA THERESA. A military order of knighthood, which was founded and established by the house of Austria on the 18th of June, 1757, and was distinguished by the name of the reigning queen and empress, being called the Imperial Military Order of Maria Theresa.

THERMES, *Fr.* Small barges or boats in which persons formerly bathed.

THERMOMETER, (*Thermometre*, Fr.) An instrument for measuring the heat of the air, or of any matter.

THERMOSCOPE, (*Thermoscope*, Fr.) An instrument by which the degrees of heat are discovered; a thermometer.

THIEF. Any person that robs another. The character of a thief is of so foul a cast in a military life, that the least imputation of dishonesty incapacitates either officer or soldier from remaining in the service.

Soldier's THIGH. A well-known part of the human frame which takes its peculiar military application from the notorious poverty of army men in general.—Hence, Soldier's Thigh figuratively means an empty purse, or, speaking familiarly, a pair of breeches that fit close and look smooth, because the pockets have nothing in them.

THILL. The shafts of a waggon; hence, the horse which goes between the shafts is called the thill horse, or thiller.

To THIN. To make less numerous. As to thin the ranks by a heavy discharge of ordnance and firearms.

THIRTEEN. A shilling is so called in Ireland; thirteen pence of that country's currency being only equal to twelve pence English.

THREE DEEP. Soldiers drawn up in three ranks, consisting of front, centre, and rear, are said to be *three deep.* It is the fundamental order of the infantry, in which they should always form and act in close order, and for which all their operations and movements are calculated.

THREES. A term used in the telling off in squadron, because the front of three horses in rank, is equal to the length of one horse from head to tail.

Ranks by threes. Each half squadron is told off by threes. See Cavalry, *Mil. Library*.

To THROW. To force any thing from one place to another; thus artillerists say, to *throw* a shot or shell, or so many shot or shells were thrown.

THRUST. Hostile attack with any pointed weapon, as in fencing. When one party makes a push with his sword to wound his adversary with the point it is called a thrust.

THUMBSTALL. A piece of leather which every careful soldier carries with him to secure the lock of his musquet from moisture.

THUNDERING-*legion*, was a legion in the Roman army consisting of Christian soldiers, who, in the expedition of the emperor Marcus Aurelius against the Sarmatæ, Quadi, and Marcomanni, saved the whole army, then ready to perish from thirst, by procuring, by their prayers, a very plentiful shower thereon, and at the same time a furious storm of hail, mixed with lightning and thunderbolts, on the enemy.

This is the account commonly given by ecclesiastical historians, and the whole history is engraven in bass-relievos on the Antonine column.

TIDEGATE. See Sluice-gate.

TIERCE. A thrust in fencing, delivered at the outside of the body over the arm.

TILE, TYLE, in *military building*, a sort of thin, factitious, laminated brick, used on the roofs of houses; or more properly a kind of clayey earth, kneaded and moulded of a just thickness, dried and burnt in a kiln, like a brick, and used in the covering and paving of different kinds of military and other buildings. The best brick earth should only be made into *tiles*.

The *tiles* for all sorts of uses may now be comprised under 7 heads, viz. 1. The *plain-tile*, for covering of houses, which is flat and thin. 2. The *plain-tile*, for paving, which is also flat, but thicker; and its size 9, 10, or 12 inches. 3. The *pan-tile*, which is also used for covering of buildings, and is hollow, and crooked, or bent, somewhat in the manner of an S. 4. The *Dutch glazed pan-tile*. 5. The *English glazed pan-tile*. 6. The *gutter-tile*, which is made with a kind of wings. 7. The *hip*, *ridge*, or *corner-tile*.

Plain-Tiles, are best when they are firmest, soundest, and strongest. Some are duskier, and others ruddier, in color. The dusky-colored are generally the strongest. These *tiles* are not laid in mortar, but pointed only in the inside.

Paving Tiles, are made of a more sandy earth than the common or *plain-tiles*: the materials for these last must be absolutely clay, but for the others a kind of loam is used. These are made thicker and larger than the common *roof-tiles*; and, when care has been taken in the choice of the earth, and the management of the fire, they are very regular and beautiful.

Pan-Tiles, when of the best kind, are made of an earth not much unlike that of the *paving-tiles*, and often of the same; but the best sort of all is a pale-colored loam that is less sandy; they have about the same degree of fire given them in the baking, and they come out nearly of the same color. These *tiles* are laid in mortar, because the roof being very flat, and many of them warped in the burning, will not cover the building so well as that no water can pass between them.

Dutch glazed Pan-Tiles, get the addition of glazing in the fire. Many kinds of earthly matter running into a glassy substance in great heat, is a great advantage to them, preserving them much longer than the common *pan-tiles*, so that they are very well worth the additional charge that attends the using them.

English glazed Pan-Tiles, are in general not so good as the Dutch ones under that denomination; but the process is nearly the same.

Dutch Tiles, for chimnies, are of a kind very different from all the rest. They are made of a whitish earth, glazed and painted with various figures, such as birds, flowers, or landscapes, in blue or purple color; and sometimes quite white: they are about 6,5 inches each way, and three quarters of an inch thick. They are seldom used at present.

Gutter-Tiles, are made of the same earth as the common *pan-tiles*, and only differ from them in shape; but it is adviseable that particular care be taken in tempering and working the earth for these, for none are more liable to accidents. The edges of these *tiles* are turned up at the larger ends for about 4 inches. They are seldom used where lead is to be had.

Hip or *Corner*-Tiles, are at first made flat like *pan-tiles* of a quadrangular figure, whose two sides are right lines, and the ends arches of circles; the upper end concave, and the lower convex; the latter being about 7 times as broad as the other: they are about 10.5 inches long; but before they are burnt are bent upon a mould in the form of a *ridge-tile*, having a hole at the narrow end, to nail them on the hip corner of the roof.

Ridge-Tiles are used to cover the ridges of houses, and are made in the form of a semi-cylindrical surface, about 13 inches in length, and of the same thickness as *plain-tiles*; their breadth at the outside measures about 16 inches.

TILLAC, *Fr.* The same as *pont*, which signifies the deck of a ship.

Franc-tillac, *Fr.* The lower deck.

TILT, a thrust, or fight with rapiers; also an old military game. See Tournament.

TILTER, one who fights or contests in a tournament.

TIMBALE, *Fr.* A brass kettle-drum, such as is used by European cavalry. French soldiers say figuratively, *Faire bouillir la timbale;* to make the pot boil.

TIMARIOT, a Turkish soldier who has a certain allowance made him, for which he is not only obliged to arm, clothe, and accoutre himself, but he must likewise provide a certain number of militia-men. The allowance is called Timar.

The Timariots are under the immediate command of the Sangiack or Bey, according to their particular distribution. When the Timariots belonging to Natolia, do not join the standard, they forfeit a whole year's allowance, which is deposited in a chest or stock-purse called *mankafat*. But the Timariots in Europe or Turkey, are not liable to this fine. When they refuse to serve, they are suspended for two years. The income of a Timariot amount to five thousand aspres, and the Timariots of Hungary have six thousand. When an Hungarian Timariot dies, the Bashaw of Buda has the power of dividing his property into two parts, which is placed to the account of the Ottoman government, and enables it to pay two soldiers.

There are different classes among the Timariots. Some are called *Ikmalers*, some *Isels*, and others *Bernobets*.

The *Ikmalers* are in possession of that species of Timar which cannot be divided for the benefit of government after the decease of the individual.

The *Isels* are subject to a division of property among two or three persons, at the will of the Porte.

The *Bernobets* are in possession of that kind of Timar which may become the property of three or four individuals who serve together, or relieve each other alternately, on condition that the one who takes the field enjoys the whole benefit of the Timar during his stay with the army. There are many of this kind in Natolia. Every thing which appertains to the Turkish cavalry, known by the name of Topachly, and which is regularly clothed, armed, accoutred, and paid by certain officers, belonging to the Ottoman empire, out of revenues called maly-mukata, may be ascertained and known under the several appellations of *Timariots*, *Zaims*, *Begliers*, and *Beglierbeys*.

TIMARS, certain revenues, in Turkey, growing out of lands which originally belonged to Christian clergy and nobility, and which the sultans seized, when they conquered the countries they inhabited.

By means of these *Timars* and *Ziamets* the Grand Signor is enabled to support the greatest part of his cavalry.

The Timars differ in value. The richest, however, do not exceed twenty thousand aspres annually, which may be considered as equal to about three hundred and fifty dollars; and the *Ziamets* receive full as much. Those who are entitled to *Timars*, are called *Timariots*, and those who have *Ziamets* are named *Zaims*.

TIMBER, in military architecture, includes all kinds of felled and seasoned wood used in the several parts of building, &c.

Oak, of all the different kinds of timber known for building, is preferred by the European nations; because, when well seasoned and dry, it is very tough and hard: it does not split so easy as other timber, and bears a much greater weight than any other. When it is used under cover, it never perishes, no more than in water; on the contrary, the older it grows the harder it becomes; and when it is exposed to the weather, it exceeds all other timbers for durability. English oak is said to be the best, American the next, then Norway, and lastly Germany. But there are various kinds of American oaks.

Elm, if felled between November and February, is all spine, or heart, and no sap, and is of singular use in places where it is always wet or dry. It is very tough and pliable; it is easily worked, and does not readily split: it bears driving of bolts and nails into it better than any other wood; for which reason it is prepared for artillery uses.

Beech is likewise a very useful wood; it is very tough and white when young, and of great strength, but liable to warp very much when exposed to the weather, and to be worm eaten when used within doors. It is frequently used for axle-trees, fellies, and all kinds of wheel-wright work: but where it is kept constantly wet, and free from air, it will outlast oak.

Ash. Its use is almost universal. It serves in buildings, or for any other uses where it is skreened from the weather: hand-spikes and oars are chiefly made of it; and indeed it is the wood that is most fit for this, or any other purpose, which requires toughness and pliability.

Fir, commonly known by the name of pine is much used in building, especially within doors. It wants but little seasoning, and is much stronger while the resinous particles are not exhausted, than when it is very dry: it will last long under water.

Chesnut-tree, especially wild chesnut, is by many esteemed to be as good as oak.

But the best of all timber for ship-building is the *Teak* of Asia; it endures water four times as long as oak, is much more easily wrought; iron spikes drove into it do not rust.

There are many other kinds of wood, used in military works, not mentioned here.

Preserving of TIMBER. When boards, &c. are dried, seasoned, and fixed in their places, care is to be taken to defend and preserve them: to which the smear-ing them with linseed oil, tar, or the like oleaginous matter, contributes much.

The Dutch preserve their gates, portcullices, draw-bridges, sluices, &c. by coating them over with a mixture of pitch and tar, whereon they strew small pieces of cockle and other shells, beaten almost to powder, and mixed with sea sand, which incrusts and arms it wonderfully against wind and weather.

Seasoning of TIMBER. As soon as felled, it should be laid in some dry airy place, but out of reach of too much wind or sun, which, in excess, will subject it to crack and fly. It is not to be set upright, but laid along, one tree upon another, only with some short blocks between, to give it the better airing, and prevent it becoming mouldy, which will rot the surface and produce mushrooms on it. Some persons daub the trees all over with cow-dung, which occasions their drying equally, and prevents their cracking, as they are otherwise very apt to do.

Some recommend the burying timber in the earth, as the best method of seasoning it; and others have found it a fine preservative to bury their timber under the wheat in their granaries; but this cannot be made a general practice. In Norway they season their deal planks, by laying them in salt water for three or four days, when new sawed, and drying them in the sun: this is found a great advantage to them; but neither this, nor any thing else, can prevent their shrinking.

Timber should always be seasoned, when it is intended for piles and other pieces that are to stand under the earth or water. The Venetians first found out this method; and the way they do it is this: they put the piece to be seasoned in a strong and violent flame, turning it continually round by means of an engine, taking it out when it is every where covered with a black coaly crust: by this means the internal part of the wood is so hardened, that neither earth nor water can damage it for a long time after.

TIME. The measure of duration, by which soldiers regulate the cadence of a march: as *slow*, *ordinary*, or *quick*, and *quickest* time or step, *which see*.

Time, in manœuvring. That necessary interval betwixt each motion in the manual exercise, as well as in every movement the army or any body of men make.

Time, in fencing. There are three kinds of time; that of the sword, that of the foot, and that of the whole body. All the times that are perceived out of their measure, are only to be considered as appels or feints to deceive and amuse the enemy.

Time *thrust*, in fencing. A thrust given upon any opening which may occur by an inaccurate or wide motion of your adversary, when changing his guard, &c.

TIMING, is the accurate and critical throwing in of a cut or thrust upon any opening that may occur as your adversary changes his position.

TIMON, *Fr.* Shafts of a cart, coach-pole.

TIMONIER, *Fr.* This word is frequently used as a sea term by the French, and signifies helmsman, or steersman, from *Timon*, which is applied to the part of the helm he holds.

TIN *tubes*. See Tubes and Laboratory.

TINDALS, *Ind.* Native officers employed in the artillery, and in ships.

TIR, *Fr.* In artillery. A term used to express the explosion or discharge of any firearm in any given direction. *Un bon, un mauvais tir*, a good, a bad shot; or a shot well or ill directed.

La theorie du tir, *Fr.* The theory or art of firing.

Tir *perpendiculaire*, Fr. A shot made in a perpendicular direction.

Tir *oblique*, Fr. An oblique shot.

Tir *à ricochet*, Fr. A ricochet shot.

Tir *rasant*, Fr. A grazing shot; or shot made *rasant*. See Fortification.

Tir *plongeant*, Fr. A downward or plunging shot.

Tir *fichant*, Fr. A shot made *fichant*. See Fortification.

La justesse du tir, *Fr.* The true direction of a shot. The French say, *ce fusil n'a pas le tire juste*, this musquet has not a true direction, or its shot diverges from the point levelled at.

TIRAILLER, *Fr.* To pester, to annoy. Hence the word *Tirailleur*.

TIRAILLEUR. A soldier who fires as he pleases; a *rifleman*.

Tirailleurs are likewise skirmishers or marksmen, advanced in front to annoy the enemy, and draw off his attention; or they are left behind to amuse and stop his progress in the pursuit; a column of infantry is often ordered to act as tirailleurs.

TIRE, are great guns, shot, shells, &c. placed in a regular form. See Piles.

Tire-*balle*, Fr. An instrument used by surgeons to extract musquet-balls.

Tire-*bourre*, Fr. In artillery, a wad-hook. It likewise signifies a worm to draw the charge out of a musquet.

Tire-*fond*, Fr. An instrument which is used among the French to fix a petard. It likewise means a surgeon's tenebra or piercer.

Tire *ligne*, Fr. An instrument used in drawing lines.

Tire-*ployer*, Fr. To discharge; to unload.

TIRER, *Fr.* To shoot, to fire.

Tirer *à boulets rouges*, Fr. To fire with red hot shot.

Tirer *des armes à feu*, To fire any species of firearm. There is a curious and well written passage on this subject in the *Supplement aux reveries de M. le Marechal de Saxe*, page 76

Tirer *le canon*, Fr. To fire or discharge pieces of ordnance.

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Tirer likewise means to move towards any place, viz. *Après la battaille gagnee, l'armee tira vers un tel lieu;* after the battle had been won, the army moved towards such a quarter.

Tirer *dix ou douze pieds d'eau*, Fr. To draw ten or twelve feet water.

Tirer *à la mer*, Fr. To put off to sea.

TIREUR, *Fr.* A game keeper, a shooter.

Tireur *d'arc*, Fr. A bowman, an archer

Tireur *d'armes*, Fr. A fencing-master.

TYROLIANS. A body of sharp shooters in the Austrian service. They take their name from the Tyrol, a country formerly belonging to Germany, about 150 miles long, and 120 broad. It is wholly mountainous, and was part of the hereditary dominions of the house of Austria; but having been twice conquered by the French, part has been irrevocably ceded to Bavaria in 1809, the rest is incorporated with the kingdom of Italy.

TOCSIN, *Fr.* An alarm ball.

TOHIE, *Ind.* A canoe.

TOISE, in military mensuration, is a French measure, containing 6 feet, or a fathom: a square toise is 36 square feet, and a cubical toise is 216 feet.

These two measures correspond in the division of the feet; but these divisions being unequal, it is necessary to observe, that the proportion of the yard, as fixed by the Royal Society at London, to the half toise as fixed by the Royal Academy at Paris, is as 36 to 38.355.

Toise *carree*, Fr. Any square extent, having six feet in every sense.

Toise *cube*, Fr. Any substance having 6 feet in length, 6 ditto in breadth, and 6 in depth.

Toise, *Fr.* This word is used in the masculine gender, and signifies, in mathematics, the science or art of measuring surfaces and solids, and of reducing the measure by accurate calculation.

Une affaire toisee, Fr. A familiar phrase signifying, the thing is done, all over.

TOISER, *Fr.* To measure by the toise.

Toiser, *Fr.* In a military sense, to take the height of a man, as, *toiser un soldat*, to take the height of a soldier. The French likewise say in a figurative sense, *toiser son homme*, to examine one's man with great attention, in order to find out his merits, or good qualities.

TOISEUR, *Fr.* A person employed among the French in the constructing and repairing of fortifications.

Toiseur, *Fr.* A measurer.

TOISON *d'or*, Fr. The golden fleece.

La Toison, *Fr.* The order of the Golden Fleece is so called.

TOKERY, *Ind.* A basket made with cane.

TOLE, *Fr.* Iron beat into thin plates.

TOMAN, *Ind.* Ten thousand men.

TOMAND, *Ind.* Equal to something more than three guineas.

TOMBER, *Fr.* To fall. *Le vent tombe*, the wind falls. *Tomber entre les mains des ennemis*, to fall into the hands of enemies.

TOMBIE, *Ind.* A wind instrument made in the shape of a globe.

TOMPION. See Tampion.

TAMSOOK *Hazin Zaminee*, Ind. A security for personal appearance.

TOMTOM, *Ind.* A small drum made in the shape of a tambourine.

TONDIN, *Fr.* A term in architecture which is seldom used. It is the same as the astragal or fillet which goes round the base of pillars.

TONG. See Tenaille.

Tongs *of a waggon*, a piece of wood fixed between the middle of the hind ends of the shafts, mortised into the fore cross-bar, and let into the hind cross-bar.

TONGUE *of a sword.* That part of the blade on which the gripe, shell, and pummel are fixed.

A triangular TONGUE. The bayonet figuratively so called from its shape.

TONNAGE, *Fr.* A word adopted from the English.

TONNAGE. A custom or impost due for merchandize brought or carried in tons from or to other nations after a certain rate in every ton.

Tonnage. The usual method of finding the tonnage of any ship is by the following rule:—Multiply the length of the keel by the breadth of the beam, and that product by half the breadth of the beam; and divide the last product by 94, and the quotient will be the tonnage.

Ship's keel 72 feet: breadth of beam 24 feet.

$$\frac{72 \times 24 \times 12}{94} = 220{\cdot}6 \text{ tonnage:}$$

The tonnage of goods and stores is taken sometimes by weight and sometimes by measurement; and that method is allowed to the vessel which yields the most tonnage. In tonnage by weight 20 cwt. make 1 ton. In tonnage by measurement 40 cubic feet equal 1 ton. All carriages, or other stores to be measured for tonnage, are taken to pieces and packed in the manner which will occupy the least room on board ship. All ordnance, whether brass or iron, is taken in tonnage by its actual weight. Musquet cartridges in barrels or boxes, all ammunition in boxes, and other articles of great weight, are taken in tonnage according to their actual weight.

The following is the tonnage required for some of the most material ordnance stores by the British usage.

TONNAGE OF ORDNANCE.

Kinds.	No.	T.	ct.	qr.
Axes, complete with handles — Pole	264	—	10	0
Axes, complete with handles — Pick	100	—	9	0
Axes, complete with handles — Felling	176	—	14	0
Barrows—Wheel, packed	20	2	2	0
Do. unpacked	7	1	0	0
Hand, single	20	0	18	0
Budge barrels	32	1	0	0
Bricks	1000	2	5	0
Buckets of leather	20	0	2	0
Pontoon & carriage complete, with its appertenances		11	0	0
Carbines.—A chest with 25 stand is 11 feet cubic				
Carriages.—Standing 42 prs.		1	13	0
32 prs.		1	10	0
Howitzer 10 in.		1	10	0
24 prs.		1	9	3
18 prs. Howitzer 8 inch.		1	7	0
12 prs.		1	4	0
9 prs.		1	3	0
6 prs.		1	0	0
4 prs.		0	17	0
Carriages.—Travelling, complete with limber boxes, ladles, sponges and rammers — 24 prs.		5	10	0
12 prs.		4	10	2
9 prs.		4	7	2
6 prs.		3	7	2
3 prs.		2	19	0
Medium — 24 prs 12 prs.		2	9	2
6 pr. light, with ammunition boxes 5 1-2 inch howitzer, Do.		2	3	0
5 1-2 howitzer of 10 cwt. — Carriages		3	2	0
8 inch howitzer — Carriages		3	7	2
Sling cart complete		3	0	2
Forage cart, with limber		4	0	0
Ammunition waggon		4	18	1
Gravel cart		2	16	2
Duke of Richmond's close bodied waggon		5	0	0
Road waggon, with upright sides		7	10	0
Gin; triangle		0	14	0
Grate for heating shot		0	4	2
Handspikes	120	1	0	0
Handcrow levers, of 5 feet	120	1	0	0
Handscrews, large	15	1	0	0
small	17	1	0	6
Helves, pick or felling	300	0	14	0
Do. sledge	300	1	0	0
Do. pinmaul	360	1	0	0
Junk	20 cwt.	1	5	0
Linstocks, with cocks	600	1	0	0
without cocks	1000	1	0	0
Musquets.—A chest with 25 is 16 feet.				
Do. with 20 is 11 feet.				
Match	6 cwt.	1	14	0
Powder — 11 whole barrels		1	0	0
Powder — 22 half do.		1	0	0
Pitch or tar.—1 barrel is 7 feet.				
Pistols.—A chest with 50 or 60 = 10 feet.				
Park pickets	40	0	9	1
Pikes	280	1	0	0
Sheep skins	12 dozen	1	1	0
Shovels of iron	100	1	0	0
Spades of iron	184	1	0	0
Shovels, shod with iron	138	1	0	0
Sand bags Bales — Bushel	500	0	12	0
Sand bags Bales — Half do.	500	0	7	1
Sand bags Bales — 2 bushel	250	0	8	1

The following is the tonnage allowed in the British service to the military officers of the ordnance embarked for foreign service, for their camp equipage and baggage:

For a field officer	5 tons
For a captain	3 do.
For a subaltern	1½ do.

TONNE, *Fr* A tun It likewise signifies a large cask or vessel which is used for stores and ammunition.

TONNEAUX *Meutriers*, Fr. Casks which are bound together with ropes, or circled round by iron hoops, and are filled with gunpowder, pebbles, &c. The particular method in which these casks are prepared may be seen in Tom. II. page 218, *Des Œuvres Militaires*.

TOOKSOWARS, *Ind.* The vizir's body of cavalry.

TOOLS, used in war, are of many denominations and uses, as laboratory tools, mining tools, artificers tools, &c. which see.

TOPARCH, (*Toparque*, Fr.) The principal man in a place.

TOPARCHY, (*Toparchie*, Fr.) Superintendence; command in a district.

TOPAS, *Ind.* This name was originally given by the natives of India to a native Portuguese soldier, on account of his wearing a *hat*; contra-distinguished from the *Hindus* and *Mahomedans* who wear *turbans*.

TOPE, *Ind.* A small wood or grove.

TOPE, *Ind.* A gun.

TOPEE, *Ind.* A hat.

TOPEE *Walla*, Ind. A person who wears a hat.

TOPEKHANA, *Ind.* The place where guns are kept; the arsenal.

TOPGI-*Bachi*. Grand master of the Turkish artillery. This appointment is one of the most important situations in the gift of the Porte. It is generally bestowed upon a relation to the Grand Signor, or upon a favorite to the Grand Visier. The name is derived from *tope*, which, in the Turkish language, signifies cannon, and from *Bach*, which means lord, chief or commandant.

The person next in command to the Topgi-Bachi is called *Dukigi-Bachi*, or master of the Topgis, who are both cannonneers and founders. The latter are paid every month by a commissary of their own, whom they call Kiatib.

TOPGIS, sometimes written Topchis. A name generally used among the Turks to signify all persons employed in the casting of cannon, and who are afterwards appointed to the guns. It is here necessary to observe, that on account of the vast extent of the Ottoman empire, the Turks do not attach much heavy ordnance to their armies, especially when they carry on their operations from one frontier to another. This is owing to the scarcity of draught-horses, and to the natural obstacles of the country. So that they seldom carry into the field guns above eight or twelve-pounders.

But when it is their design to form any considerable siege, they load camels with all the materials requisite for casting cannon. A certain number of Topgis accompany them, and the instant the army takes up its quarters near to the spot where the attack is to be made, they set to work and cast pieces of ordnance of every species of calibre or bore.

The Turkish cannon is extremely beautiful and well cast. The ornamental parts consist of plants, fruits, &c. for it is expressly forbidden in the Koran to give the representation of any human figure upon fire-arms, particularly upon pieces of ordnance; the Turks being taught to believe that God would order the workman to give it life, or would condemn him to eternal punishment.

The Turks are very awkward in constructing platforms for their batteries, and are almost ignorant of the art of pointing their pieces. From a consciousness of their deficiency on this head, they encourage Christian artillerymen and engineers to come amongst them; but until the year 1798, they seldom viewed them but with a jealous eye, and always gave the preference to renegadoes. General Koehler, with a few British officers belonging to the train, joined their army in 1800 for the purpose of acting against Egypt.

TOPIKHANNAH, *Ind.* A house for keeping guns, an arsenal, armory.

TOPOGRAPHER. A person skilled in viewing, measuring, and describing ground.

TOPOGRAPHICAL ENGINEERS. A body of military men which are now become essential in war.

TOPOGRAPHICAL DEPOT. The following short sketch of the only institution of this kind which is peculiar to France, will explain its nature and origin. Louvois minister of Louis XIV. in 1668 undertook to reform all the departments of government; and the war department among the rest. His death interrupted his design which was nevertheless afterwards pursued upon the peace of Utrecht in 1713: when all the military papers were classed, under different heads, and tables of contents to each prepared, amounting to 2700 volumes. These papers embraced all military subjects from 1631 to that time.

In 1696 a corps called "engineers of camps and armies" was instituted; who in 1726 were called "geographical engineers" employed with the staff in drawing plans, &c. But their drawings were used only in the camp, until 1744, when d'Argenson improved the corps and established them at Versailles. It was from this depot that *Voltaire* obtained all the materials which render his concise sketches of history more accurate and preferable to any other, who has not made use of his materials.

In the seven years war, the *Hotel de la Guerre* was erected at Versailles, it was completed in 1760. Berthier who was the intimate friend of marshal Saxe was appointed *chief geographical engineer*; and he collected a vast body of charts, drawings, and topographical sketches on the Rhine, Hesse, Westphalia, Hanover, &c.

But some idea of former insufficiency may be had from the following anecdote taken from memoirs of marshal Rochambeau (the same who served with Washington) published at Paris in 1809: the marshal was an officer under marshal Richelieu at the attack on Minorca during the seven years war, which he thus describes:—"When the marshal left Versailles to proceed on the expedition, there could be found only one plan very old of Port Mahon, in the military depot, and this was merely a draft of Fort St. Philip. M. de Valliere, a minister of that day, who was much better adapted to be a man-midwife than a chief of the war depot, was consulted, and said that 24 pieces of heavy ordnance and 15 mortars would be sufficient to lay the place in ashes. At Toulon, Richelieu had some discourse with a captain of a merchant ship who had been prisoner at Port Mahon, who said the duke's plan of St. Philip was no more like it than the Bastile. This intelligence induced the duke to take 14 pieces of artillery and 7 mortars more. But what was our astonishment when on the first sight of Fort St. Philip we discovered works bristled with arms and fortifications presenting 140 embrasures with their tompions out."

There can be no greater ignorance than this in military affairs, excepting the ignorance of the British at Walcheren in 1809, who did not know that the channel which formerly made Cadsand an island, and separated it from the continent, had been filled up and become terra firma for 25 years preceding.

By an arret of 1769 the topographical board was again revived, but fell into neglect. St. Germain made them one corps with the engineers; but they were again separated in 1777. M. de Vault who had been the soul of the institution for 40 years, ever since 1750, died in 1790, he had digested all the materials of the wars down to the year 1763 in a military historical manner, they amounted to 125 volumes. It come under the care of his colleague M. Beaudoin, who died, and was succeeded by general Mathieu Dumas, until the revolution; when the war depot in 1791 was removed to Paris for safety and for use. Colon, Desdorides, Lacuer, and Carnot, were active in it; Carnot for his own advantage and convenience formed out of this a private topographical cabinet, to which may be attributed the developement of those grand combinations, which put fourteen armies in motion and maintained their co-operation in a manner which has astonished mankind, and laid the foundation for those congenial achievements which have since subverted all previous axioms in tactics and prostrated and encircled Europe.

But the want of topographers being so much felt in the early campaigns of the revolution no doubt stimulated Carnot to render it perfect. Accordingly the corps was new organized, three companies were formed, and each composed of 12 artists and a considerable number of pupils or assistants to each. These were employed on the topography of Bavaria, Suabia, &c. the materials collected in Italy, Piedmont, Spain, Naples, Egypt, and St. Domingo. The grand map of France by Cassini; the chart by Ferraris of the Netherlands, and Piedmont by Borgonio, were engraved under the inspection of this corps. During the war all topographical materials were collected with zeal. General Dupont (who has been since made prisoner in Spain) considerably improved and enriched it; Ernouf who was lately commander of one of the French W. I. islands, was for a time at the head of this depot; its organization was completed in 1795. General Clarke, having been educated in this corps, was placed at the head of it in the year 1800. A library was established and 8000 volumes appropriate to the subject added by him. In 1801 it was enriched with all that the campaigns of Bonaparte procured.

But the most important of its works was a plan of France upon a combined projection of 4 points of view taken on the banks of the Rhine, 24 topographical engineers under Franchot the astronomer accomplished this. The organization was further improved on a project of general Clarke; general Andreossi afterwards succeeded, and under his care numerous charts were engraved and published.

The following is an abstract of the contents of the depot. 2700 volumes ancient archives; 8000 select additional volumes; 900 rolls of modern topographical plans; 131 volumes and 78 rolls modern narrative, each of which is composed of at least 50 individual memoirs; 4700 engraved maps; 7400 manuscript plans of battles, marches, encampments, &c.

It furnished to the army before 1804, engraved maps 7278; manuscript plans and drawings 207; 61 atlases, and upwards of 600 narrative memoirs.

In the early formation of this and other scientific establishments, in the talents which directed and the liberality that provided them, we see one of the real causes why France is superior in war to all other nations.

TOPOGRAPHY. In *military history*, a description or draught of some particular place, or small tract of land, as that of a fortification, city, manor or tenement, garden, house, castle, fort, or the like; such as engineers set out in their drawings, for the information of their prince or general. Hence a topographical chart—*Carte Topographique*.

TOPSYTURVY. Upside down, or, as our old authors more properly wrote it, (to use Mr. Tooke's words in his Diversions of Purley,) Up so down; bottom upward. It corresponds with the French term, *Sans dessus dessous;* without top or bottom: *i. e.* a situation of confusion, in which you cannot discern the top from the bottom, or say which is the top and which the bottom. When a battalion is so awkwardly managed, either through the ignorance of the chief who gives the several words of command, or through the dullness of the officers and soldiers who are to execute them, that the grenadiers get where the light infantry should stand, and the rest of the companies out of their proper fronts and positions, such a battalion may be said to be topsyturvy. There is a sea-phrase in familiar use among the military, which means the same thing, viz. to *capsize*, *renverser*. *Chavirer quelque chose*, *comme une embarcation*, &c. To turn upside down, as to capsize a piece of ordnance. Hence, figuratively, to capsize a battalion, which means the same as to club a battalion. See To Club.

TOQUE, *Fr*. A velvet cap with the sides turned up, and flat at the top. The *Cent Suisses*, or the French king's Swiss body guard, wore the *toque* during the French monarchy.

TOR. A tower or turret.

TORCHES, (*Torches*, Fr.) In military matters, are lights used at sieges, &c. They are generally made of thick ropes, &c.

TORCHIS, *Fr*. Mud-clay, with which cottager's huts, &c. are made in most countries.

TORE, *Fr*. See Torus.

TORUS. In architecture, a large round moulding used in the bases of columns.

TORLAQUI. A sort of priest in Turkey.

TORNADO. A Portuguese word which is used on the southern coasts of Africa, to express furious whirlwinds that are often fatal to mariners and seamen. Dr. Johnson calls it generally, a hurricane; a whirlwind.

TORPEDO. A military machine for defence, invented by Mr. Robert Fulton, an American; there are various kinds adapted to positions and methods of defence or attack; the machine is a case of copper, oblong, and containing 100 lbs. or more of powder; to the end of the case is a kind of *lock* about the size of a parlor door brass lock, inside of which are clock works so formed as to be set to any number of seconds or minutes required, which being expired, the gunpowder in the case is exploded, and all above is torn to pieces by the explosion.

TORSE, *Fr.* This word means literally, twisted. In architecture it signifies a pillar, the body of which, or the part between the base and the capital, is surrounded with concave and convex circular lines.

TORTOISE. See Testudo.

TORTS, *Fr.* See Wrongs.

TORTUE, *Fr.* Literally means tortoise. It likewise signifies the testudo, or tortoise, a warlike machine which was used among the ancients

TORTUE *d'hommes*, Fr. A particular formation which was formerly adopted by the besieged when they made a sortie.

TORTUE *de Mer*, Fr. A sort of vessel which has its deck raised in such a manner, that it resembles the roof of a house, beneath which soldiers and passengers may conveniently stand or sit with their baggage in bad weather.

TOSHA *Khanna*, nd. Store-room, wardrobe.

TOSTE, *Fr.* A rowing bench in a boat. It is likewise called *Toste de Chaloupe*.

TOUCH-HOLE. The vent through which the fire is conveyed to the powder in the chamber of a gun.

TOUR, *Fr.* Turn. This word is likewise used by the English in military matters, as tour of duty.

TOUR *à feu*, Fr. A light house.

TOUR *de bâton*, Fr, By-profits. See Baton.

TOURNAMENT. From the old French word *tournoi*, which is derived from *tourner*, to turn. An exercise of mock battle formerly practised, wherein princes and gentlemen afforded specimens of their dexterity and courage in public places, by entering the lists and encountering all opposers. They were well mounted on horseback, clad in armor, and accoutred with lance and sword; first tilted at one another, and then drew their swords and fought hand to hand.

These exercises being designed to make the persons, who practised them, expert in the art of war, and also to entertain the court, the arms were in a great measure rendered so far innocuous that they could not kill the combatants. For this purpose the points of the lances and swords were broken off; but notwithstanding this precaution, frequent mischief occurred. In consequence of which the Pope prohibited all sorts of tournaments, under pain of excommunication.

Tournaments had their origin from the ancient gladiatory combats, and not from the usage of the northern people, as is commonly believed. In Cicero's time they were called by the Greek name Anabatis; because their helmet in a great measure obstructed their seeing.

TOURNEE, *Fr* A circuitous journey made for the purpose of inspection, &c.

Le Général fit une tournee *pour examiner les avant postes.* The general went round to examine the outposts.

Tourne *à gauche*, Fr. A tool used by carpenters, masons, and other artizans, in turning screws, saws, &c.

TOURNER, *Fr.* To turn. In military matters it signifies to get upon the flank or in the rear of any object you propose to attack.

Tourner *un ouvrage*, Fr. In fortification, to turn a work. This is effected by cutting off its communication with the main body of the place, and taking possession of the gorge. *Tourner le flanc*, to turn the flank. *Tourner l'aile droite ou l'aile gauche*, to turn the right or left wing. *Tourner un poste, une montagne*, to get into the rear of a post, mountain, &c.

TOURNIQUET, *Fr.* A turnstile. It likewise signifies a swivel or iron ring.

Tourniquet, *Fr.* Among artificers, a species of firework composed of two fusees, which, when set fire to, produces the same effect as the *Soleil Tournant*.

Tourniquet, (*Tourniquet*, Fr.) In surgery, an instrument made of rollers, compresses, screws, &c. for compressing any wounded part so as to stop hæmorrhages.

The common Tourniquet is very simple, consisting only of a roller, which, with the help of a small stick, serves to stop the effusion of blood from large arteries, in amputation, by forcibly tying up the limb. The things required in this operation are, a roller of a thumb's breadth, and of an ell in length; a small cylindrical stick, a conglomerated bandage, two fingers thick and four long; some compresses of a good length, and about three or four fingers breadth, to surround the legs and arms, and a square piece of strong paper or leather, about four fingers wide. By the British regulations published in 1799, for the better management of the sick in regimental hospitals, every surgeon and assistant surgeon is directed to have, among other surgical instruments, a certain number of tourniquets; and serjeants, &c. are to be taught the method of using it.

In May, 1798, two tourniquets were directed to be sent to each English regiment, the rest are to be made by the men of the regiment; and besides one to each person who will be taught the use of it, it is necessary to have four for every hundred men.

The non-commissioned officers, band, and drummers of every regiment, are to be taught the manner of applying it according to instructions sent down from the surgeon general's department.

TOURNOIS, *Fr.* Tournament.

TOURS *Mobiles*, Fr. Moveable towers. These were made use of in remote ages; and although the invention of them has been attributed by some to the Greeks and by others to the Romans, it does not belong to either; for we read of moveable towers in Ezekiel. The curious may derive much information on this head from the Chevalier Folard in his translation of Polybius, page 536, tom. ii. See Moveable Towers.

TOURS *bastionnees*, Fr. See Tower bastions

Tours *isolees*, Fr. Detached towers; such as are made in forts, or stand upon the coast to serve for lighthouses.

Tours *terrieres*, Fr. Large pieces of wood which are used in mechanical operations to convey or remove heavy burthens.

La TOURBE *menue*, Fr. The common people, the rabble.

TOURBILLON, *Fr.* Whirlwind, vortex. The French likewise call a water-spout by this name.

Tourbillon *de feu*, Fr. See Soleil Montant.

TOURELLE, *Fr.* A turret.

TOURILLON, *Fr.* A sort of pivot upon which several machines, such as draw-bridges, &c are made to turn.

TOURILLONS. See Trunnions.

TOURMENTE, *Fr.* A violent storm.

TOURTEAU *Goudronné*, Fr. Old rope which is untwisted, steeped in pitch or tar, and afterwards left to dry. It is used in fosses and other places during a siege. The French make the *Tourteau Goudronné* in the following manner.—Take 12 pounds of tar or pitch, 6 ditto of tallow or grease, which put to 3 pints of linseed oil, and boil the whole together. You then take old matches, or twisted pieces of rope of any length you want, and let them soak in the boiling liquor. If you wish to prevent them from burning too fast, add six pounds of rosin and two of turpentine.

TOUT *le monde haute*, Fr. A French word of command at sea which corresponds with our sea phrase, Pipe! all hands up.

TOUT *le monde bas*, Fr. A French word of command at sea which corresponds with Pipe! all hands down.

Toute *volee*, Fr. Random shot.

Tirer a toute volee. To fire at random.

TOWER, (*Tour*, Fr.) Any high building raised above another, consisting of several stories, usually of a round form, though sometimes square or polygonal; a fortress, a citadel. Towers are built for fortresses, prisons, &c. as the tower of the Bastille, which was destroyed by the inhabitants of Paris in 1789.

The Tower *of London*, commonly called the Tower. A building with five small turrets at different angles above it, situated on the banks of the river Thames.

The Tower of London is not only a citadel to defend and command the city, river, &c. but it is also a royal palace, where the kings of England with their courts have sometimes lodged; a royal arsenal, wherein are stored arms and ammunition for 60,000 soldiers; a treasury for the jewels and ornaments of the crown; a mint for coining money; the archives wherein are preserved all the ancient records of the courts of Westminster, &c. and the chief prison for state delinquents. The officers belonging to the Tower of London consist of

	per ann.		
1 constable and chief governor at	1000	0	0
1 lieutenant governor, at	700	0	0
1 deputy lieutenant, at	365	0	0
1 major, at	182	10	0
1 chaplain, at	121	13	4
1 gentleman porter, at	84	6	8
1 gentleman gaoler, at	70	0	0
1 physician, at	182	10	0
1 surgeon, at	45	12	6
1 apothecary, 1 yeoman porter			

Tower-*bastions*, in fortification, are small towers made in the form of bastions, by M. Vauban, in his second and third method; with rooms or cellars underneath to place men and guns in them.

Martello Tower. See Tours Mobiles.

Moveable Towers, in ancient military history, were three stories high, built with large beams, each tower was placed on 4 wheels or trucks, and towards the town covered with boiled leather, to guard it from fire, and to resist the darts: on each story 100 archers were posted. They were pushed with the force of men to the city wall. From these the soldiers, placed in the different stages, made such vigorous discharges that none of the garrison dared to shew themselves on the rampart.

TOWN. Any walled collection of houses.

Town-*Adjutant*. An assistant to the town-major. See Adjutant.

Town-*Major*. An officer constantly employed about the governor or officer commanding a garrison, &c. He issues the orders to the troops, and reads the common orders to fresh troops when they arrive. He commands according to the rank he had in the army; but if he never had any other commission than that of town or fort-major, he is to command as youngest captain. See Major.

TRABAND. A trusty brave soldier in the Swiss infantry, whose particular duty was to guard the colors and the captain who led them. He was armed with a sword and a halbert, the blade of which was shaped like a pertuisan. He generally wore the colonel's livery, and was excused all the duties of a centry. His pay was eight deniers more than the daily subsistence of the company.

TRABEA, *Trabee*, Fr. A white gown bordered with purple, and adorned with clavi or trabeæ of scarlet. See Kennett's R. A. page 313.

TRACER, *Fr.* To trace.

TRACES. The harness by which beasts of draught are enabled to move bodies to which they are yoked.

TRAHISON, *Fr.* Treason.

Haute Trahison, *Fr.* High treason.

Tuer en TRAHISON, *Fr.* To kill in a treacherous manner.

TRAIL. In gunnery. The end of a travelling carriage, opposite to the wheels, and upon which the carriage slides when unlimbered or upon the battery. See CARRIAGES.

To TRAIL, literally means to draw along the ground. In military matters it signifies, to carry the firelock in an oblique forward position, with the butt just above the ground. Hence *Trail Arms*, a word of command for that purpose.

TRAINE, *Fr.* A term known among French sailors and soldiers at sea, to signify a thin rope or rather packthread, to which they tie their linen; leaving it to float or be dragged through the waves until it is clean.

TRAIN, (*Train*, Fr.) In a military sense, all the necessary apparatus, implements of war, such as cannon, &c. that are required at a siege or in the field.

TRAIN *of Artillery*, (*Traine d'artillerie*, Fr.) in a general sense, means the regiment of artillery; it also includes the great guns and other pieces of ordnance belonging to an army in the field. See ARTILLERY.

TRAIN, (*Trainee*, Fr.) In mining. A line of gunpowder laid to give fire to a quantity thereof, which has been lodged for the purpose of blowing up earth, works, buildings, &c.

TRAIN, is also used to denote the attendants, of a prince or general, upon many occasions.

TRAIN-*bands*, or *trained bands*, a name formerly given to the militia of England.

TRAINEAUX, *Fr.* Several pieces of wood made in the form of a large sledge upon which pieces of ordnance and stores, &c. are conveyed to the rampart, and brought from one place to another.

TRAINEURS, *Fr.* Men who on a march lag behind, and thereby occasion a loose and unconnected appearance in the line of march. It is the duty of the rear guard to pick up all stragglers, and to report them to head-quarters.

TRAINEUR *d'epee.* A parasite; a man who has never done a day's duty, but wears a sword and looks big.

TRAITS, *Fr.* Drag-ropes, &c. used in the artillery.

TRAJECTORY *line*, is the curved line formed by the shot after the explosion to the end of its career.

TRAJET. See FERRY.

TRAMONTANE, *Fr.* The north wind in the Mediterranean is so termed by the French. It is so called, because it blows beyond the hills that are near Rome and Florence.

TRANCHANT, *Fr.* Cutting.

Une epee à deux TRANCHANS, *Fr.* A two-edged sword.

TRANCHEE, *Fr.* See TRENCH.

TRANCHEE *double*, Fr. A double trench, one side of which serves as a traverse to the other; by which means they are mutually covered from a reverse or enfilade firing.

TRANCHEE *a crochet*, Fr. A bending trench, or one in the shape of a hook. This species of trench is found where the line turns, at the extremities of the places of arms, and at the ends of the cavaliers.

TRANCHEE *directe*, Fr. A trench which is carried, or run out in a strait forward direction, and which serves to shut up any spot from whence you might be enfiladed

TRANSFERS. Soldiers taken out of one troop or company and placed in another are so called.

TRANSFIXED. An ancient term used to express the state of being desperately wounded by some pointed instrument, as being run through by a spear, javelin or bayonet; pierced through so that the weapon is fixed in another body.

TRANSOMS. In artillery. Pieces of wood which join the cheeks of gun-carriages; there is but one in a truck-carriage, placed under the trunnion-holes; and four in a wheel-carriage, the trail, the centre, the bed, and the breast transoms.

TRANSOM-*plates*, with hooks.—There is one on each side of the side-pieces, against each end of the transom, the bed-transom excepted, fastened by two transom-bolts.

TRANSOM-*bolt*, with bars. They serve to tie the side-pieces to the transom.

TRANSPIRATION, *Fr.* This word is used by the French in hydraulics, to signify the oozing of water through the pores of the earth. It often happens, in digging a canal through sandy ground, that the transpirations or oozings, are so plentiful as not to leave water enough for the intended purposes of navigation. This occurred at New-Brisac, when a canal was dug in order to convey materials for its fortifications. The waters having been let in, the whole body was absorbed in the space of twenty-four hours. This evil or inconvenience can, however, be remedied; as may be seen in the fourth volume of Belidor's *Architecture Hydraulic.*

TRANSPORT. A vessel in which soldiers are conveyed on the sea. See EMBARKATION.

TRANSPORT-*Board.* An English office established in 1794, which has the entire arrangement of the transport service, and of prisoners of war, in conjunction with the sick and hurt board. It consists of five commissioners, who are captains in the navy, and a secretary.

TRANSPORTER, *Fr.* To transfer, to remove, to change the situation of any thing.

TRANSPORTER *les files et les rangs d'un bataillon dans les evolutions*, Fr. To change files or ranks in military evolutions. To countermarch any given number of men so as to place the right where the left stood, and make the front rank take the ground that was occupied by rear, with a different aspect. See COUNTERMARCH.

When the countermarch is effected on the centre, or by a central conversion, the French distinguish, and use the phrase—*Faire le moulinet;* from the similarity of movement round a central point; *moulinet* signifying *capstan*, turn-stile, &c.

TRANSPOSER *les files d'un bataillon dans les évolutions*, Fr. To change the relative position of files in a battalion, that is, to countermarch the whole so as to make the natural front stand where the rear did, and to place those on the left that originally stood on the right.

TRAP. See AMBUSH, STRATAGEM, &c.

TRAPE, *Fr.* A falling door.

TRAPEZE, *Fr.* See TRAPEZIUM.

TRAPEZOID, (*Trapezoide*, Fr.) A figure in geometry which is formed by the circumvolution of a trapezium, in the same manner that a cylinder is by that of a parallelogram.

TRAPEZIUM. A quadrilateral or square figure whose four sides and angles are unequal, and no sides are parallel.

TRAPPINGS. See HOUSINGS.

TRATTES, *Fr.* The Several beams and long pieces of wood which support the body of a windmill.

TRAVADE, *Fr.* A whirlwind; violent squall accompanied by thunder and lightening.

TRAVAILLER, *Fr.* To work. In mechanics; to warp, to open, &c. The French say, *Ce bois travaille;* this wood warps—*Ce mur travaille;* this wall gives way, &c.

TRAVAILLER, *a la journee*, Fr. To work by the day—*A la piece*, by the piece: —*à la tâche*, by the measure:—*En bloc et en tâche*, by the great, by the lump.

TRAVAILLER *à Toise*, Fr. To work by the toise. Works in fortification are generally done by this measure.

TRAVAILLER *par epaulees*, Fr. To execute a work with intervals of labor.

TRAVAILLER *les esprits des soldats*. To work upon the minds of the soldiery. To excite them to insurrection.

TRAVAILLER *un pays*. To feel the pulse of a country by working upon the minds of the inhabitants; to excite them to support any particular cause.

TRAVAILLEURS, *Fr.* Literally, workmen. In military matters, pioneers and soldiers employed in fatigue duties.

TRAVAILLEURS, *à la tranchee*, Fr. A detachment, consisting of a given number of men from each battalion, which is employed in the trenches. The soldiers who are sent upon this duty have only spades and pick-axes, and the officers who command them wear their swords.

TRAVAISON, *Fr.* Entablature.

TRAVAUX *Militaires*, Fr. See MILITARY WORKS.

TRAVAUX *avancés*, Fr. Advanced works or outworks. The same as *pieces detachees*, or *dehors*. See DEHORS.

TRAVEE, *Fr.* A bay of joists. A scaffold.

TRAVELLING *forge*. See FORGE.

TRAVERS, *Fr.* A rope which is used to fasten cannon on their carriages, &c. and which serves for various other purposes.

TRAVERSEE, *Fr.* Passage; short trip by sea.

TRAVERSE. In fortification, is a parapet made across the covert-way, opposite to the salient angles of the works, near the place of arms, to prevent being enfiladed. Traverses are 18 feet thick, and as high as the ridge of the glacis. There are also traverses made by caponiers; but then they are called tambours.

To TRAVERSE, a gun, or mortar, is to bring it about to right or left with hand-spikes, till it is pointed exact to the object.

TRAVERSIER, *Fr.* A passage boat, &c. It likewise means a wind that blows into port; also a pontoon.

TRAVERSINES, *Fr.* Pieces of wood which are laid cross-ways in a dyke.

TRAVERSING-*plates*, in gun-carriages, are two thin iron plates, nailed on the hind part of a truck carriage of guns, where the hand-spike is used to traverse the gun.

TRAVERSING, in fencing, is the change of ground made by moving to right or left round the circle of defence.

TRAVONS, *Fr.* The large main beams in a wooden bridge, which support the joists, &c. They are likewise called *sommiers*.

TRAVESTISEMENT, *Fr.* Disguise. In the old French service, it was ordained, that no dragoon or foot soldier should change his uniform or regimentals whilst in garrison, nor within the boundaries of it. Every infraction of this order was punished with three months imprisonment.

TRAUMATIC. Vulnerary; useful to wounds; as *Traumatic* decoction.

TREACHERY. Perfidy; breach of faith.

TREASON. Disloyalty; treachery; perfidious dealing.

High TREASON. An offence against the security of the commonwealth, or of the sovereignty. It is a capital crime, and subjects the offender not only to loss of life, but also to forfeiture of all he may possess.

TRECHETOR, } One who betrays a
TRECHEUR, } place, or body of men. An obsolete word.

TREFLE, *Fr.* Trefoil. A term used in mining, from the similarity of the figure to trefoil. The simple trefle has only two lodgments; the double trefle four; and the triple one six.

TREILLAGE, *Fr.* Any assemblage of wood which is laid cross-ways. Of which description are the palisadoes, &c. in gardens

TREILLIS, *Fr.* A general term for iron grating, &c. Such as is used for prisons.

Treillis, *Fr.* The method that is used in copying plans, &c. It consists of a certain arragement of strait lines, which being measured at equal distances from one another, and crossed from right to left, represents a quantity of small equal squares. This arrangement or disposition of lines is used by painters, engravers, and engineers, in taking accurate copies of plans, &c. and is called by the French *Treillis*.

TREILLISER. To trellis. To furnish with a trellis.

TREMEAU, *Fr.* An ancient term in fortification. See Mortar.

TRENCHANT. Sharp or cutting.

TRENCHES, in a siege, are ditches made by the besiegers, that they may approach more securely to the place attacked; on which account they are also called lines of approach. The tail of the trench is the place where it was begun, and its head is the place where it ends.

Trenches are also made to guard an encampment.

The trenches are usually opened or begun in the night time, sometimes within musquet shot, and sometimes within half or whole cannon shot of the place; generally about 800 toises. They are carried on in winding lines, nearly parallel to the works, so as not to be in view of the enemy, nor exposed to the enemy's shot.

The workmen employed in the trenches are always supported by a number of troops to defend them against the sallies of the besieged. The pioneers, and other workmen, sometimes work on their knees, and are usually covered with mantlets or saucissons; and the troops who support them lie flat on their faces, in order to avoid the enemy's shot. On the angles or sides of the trench, there are lodgments, or epaulements, in form of traverses, the better to hinder the sallies of the garrison, and to favor the advancement of the trenches, and to sustain the workmen.

The platforms for the batteries are made behind the trenches; the first at a good distance, to be used only against the sallies of the garrison. As the approaches advance, the batteries are brought nearer, to ruin the defences of the place, and dismount the artillery of the besieged. The breach batteries are made when the trenches are advanced near the covert-way.

If there are two attacks, it will be necessary to have lines of communication, or boyaus, between the two, with places of arms at convenient distances. The trenches are 6 or 7 feet high with the parapet, which is 5 feet thick, with banquettes for the soldiers to mount upon.

The approaches at a siege are generally carried on upon the capitals of the works attacked; because the capitals produced are, of all other situations in the front of a work, the least exposed to the fire of either the cannon or musquetry; and are the least in the line of fire between the besieged and besieger's batteries. But if, from particular circumstances, these or other advantages do not attend the approaches upon the capitals, they are by no means to be preferred to other positions.

The trenches of communication, or zig-zags, are 3 feet deep, 10 feet wide at bottom, and 13 feet at top, having a berm of one foot, beyond which the earth is thrown to form a parapet.

The parallels or places of arms of the trenches are 3 feet deep, 12 feet wide at bottom, and 17 or 18 feet wide at top, having a banquette of about 3 feet wide, with a slope of nearly as much. See Sap.

The first night of opening the trenches, the greatest exertions are made to take advantage of the enemy's ignorance as to the side of attack; and they are generally carried on as far in advance as the first parallel, and even sometimes to the completion of that work. The workmen set out on this duty, each with a fascine of 6 feet, a pick axe, and a shovel; and the fascines being laid so as to lap one foot over each other, leave 5 feet of trench for each man to dig.

The usual method of directing the trenches or zig-zags is, by observing during the day some near object in a line with the salient parts of the work, and which may serve as a direction in the night; or if the night be not very dark, the angles of the works may be seen above the horizon; but as both these methods are subject to uncertainty, the following is proposed to answer every case:—Having laid down the plan of attack, the exact positions of the flanked angles of the works of the front attacked, and particularly of those most extended to the right and left; marked on the plan the point of commencement for the first portions of zig-zag, the point where it crosses the capital, and the point to which it extends on the other side of the capital: this last point will be the commencement of the second branch: then mark off the point where this branch crosses the capital, and its extent on the other side; and this will give the commencement of the third branch; and so on for the others. Thus provided with a plan ready marked off, it will be very easy, even in the darkest night, to lay down the points where the zig-zags are to cross the capital, and the points to which they are to be produced beyond them. The first parallel is generally run about 600 yards from the place, and of such extent as to embrace the prolongation of the faces of all the works which fire upon the trenches; and each end has a return of about 30 or 40 yards.

The second parallel is constructed upon the same principles, and of the same extent as the first, at the distance of about 300 yards from the salient angles of the covert-way. This parallel is usually formed of gabions; each workman carrying a gabion, a fascine, a shovel, and a pick axe. After this the trenches are carried on by sap.

The half parallels are about 140 or 150 yards from the covert-way, and extend sufficiently on each side to embrace the prolongation of the branches of the covert-way.

The third parallel must not be nearer than the foot of the glacis, or it will mask the ricochet batteries. It is generally made rather wider than the other parallels.

Cavaliers of the trenches must not be nearer than 28 yards from the covert-way, or they will be liable to be annoyed by hand grenades.

Returns of a TRENCH, are the elbows and turnings, which form the lines of approach, and are made, as near as can be, parallel to the place, to prevent their being enfiladed.

To mount the TRENCHES, is to mount guard in the trenches, which is generally done in the night.

To relieve the TRENCHES, is to relieve the guard of the trenches.

To scour the TRENCHES, is to make a vigorous sally upon the guard of the trenches, force them to give way, and quit their ground, drive away the workmen, break down the parapet, fill up the trench, and spike their cannon.

Counter-TRENCHES, are trenches made against the besiegers; which consequently have their parapets turned against the enemy's approaches, and are enfiladed from the several parts of the place, on purpose to render them useless to the enemy, if they should chance to become masters of them; but they should not be enfiladed, or commanded by any height in the enemy's possession.

To open the TRENCHES, is to break ground for the purpose of carrying on approaches towards a besieged place.

TRENTE-*six mois*, Fr. Thirty-six months. A sea phrase. By this term was understood among the French, before the revolution, *Un Engagé*, a person who hired himself for that period to another, on condition that the latter defrayed his passage to the East Indies; after the expiration of which term the former was at liberty to settle in that country.

TREPAN, *Fr.* An instrument which is used to find out the quality of any ground into which beams or sticks are to be driven. Also an instrument used in surgery.

TREPIGNER. To clatter. In horsemanship it is used to describe the action of a horse who beats the dust with his fore-feet in managing, without embracing the vault; who makes his motions and time short and near the ground, without being put upon his haunches. This defect is usually occasioned by a weakness in the shoulders.

TRESOR, *Fr.* The military chest.

TRESORIER, *Fr.* Paymaster. There were formerly on the French military establishment two classes of paymasters, viz. *Trésoriers de l'ordinaire*, et *trésoriers de l'extraordinaire*, paymasters or treasurers for the ordinary expences of the service, and ditto for the extraordinary. The latter were accountable to government for a just distribution of stores and provisions, and gave in their estimates and vouchers to the comptroller general's office in Paris. These were formerly called *Clercs du trésor* ou *payeurs*, clerks attached to the military chest or paymasters. They were partly the same as our paymasters and commissaries-general on service.

During the monarchy in France there were several treasurers or paymasters-general in ordinary belonging to the army, who had their several departments, viz.

TRESORIERS *de la gendarmerie et des troupes de la maison du roi*, Fr. Treasurers or paymasters attached to the gens d'armes and the king's household.

TRESORIERS *de l'extraordinaire des guerres*, Fr. Treasurers or paymasters of the extraordinaries of the army.

TRESORIERS *des Maréchaussées de France*, Fr. Treasurers or paymasters of the marshalsey or armed police of France.

TRESORIERS *payeurs des troupes*, Fr. Treasurers or paymasters-general of the forces.

TRESORIERS *des gratifications*, Fr. Treasurers or paymasters of compensations, gratuities, &c.

TRESORIES *de la prévôté de l'Hotel*, Fr. Treasurers or paymasters of the provost-marshal's department at the hotel or town hall in Paris.

Le TRESORIER *général de l'artillerie*, Fr. The treasurer or paymaster-general of the artillery.

Le TRESORIER *général des fortifications*, Fr. The treasurer or paymaster-general of fortifications.

All these treasurers or paymasters were subject to their several comptrollers of accounts, and their issues, &c. were audited accordingly. There were likewise provincial or subordinate paymasters of the extraordinaries of the army. They were appointed by the treasurers or paymasters-general, and resided in the different departments and general districts of the kingdom. These appointments fell, of course, at the revolution, and they have since been replaced by a more simple and economical consolidation.—The artillery has still its separate treasurer or paymaster. The district paymasters, which have been established in Great Britain, &c. during the present war, seem manifestly to have taken their origin from the old French arrangement.

TREVET. Any thing that stands upon three legs. An iron instrument to set a pot or saucepan on over the fire. It is likewise used in field-ovens.

TREUIL, *Fr.* A roll, an axle-tree, &c.

TRIAIRES, *Fr.* See TRIARII.

TRIAL. Test, examination, experiment. It is in the power of the president to dismiss an officer from the regular, militia, or volunteer service, without any species of investigation or trial. See COURTS MARTIAL, *&c.*

TRIANGLE, (*Triangle*, Fr.) The triangle may be considered as the most simple of all figures. It is composed of three lines and three angles, and is either plain or spherical.

A plain TRIANGLE is one that is contained under three right lines.

A spherical TRIANGLE is a triangle that is contained under three arches of a great circle or sphere.

A right-angled TRIANGLE is one which has one right angle.

An acute-angled TRIANGLE is one that has all its angles acute.

An obtuse-angled TRIANGLE is that which has one obtuse angle.

An oblique-angled TRIANGLE is a triangle that is not right angled.

An equilated TRIANGLE is one whose sides are all equal.

An isosceles TRIANGLE, } A triangle
An equilegged TRIANGLE. } that has
only two legs or sides equal.

A scalenus TRIANGLE. One that has not two sides equal.

Similar TRIANGLES are such as have all their three angles respectively equal to one another.

TRIANGLE. The psaltery of the Scriptures. A small triangular piece of metal, which is used in military bands, emitting a sharp reverberating sound in concord with the rest of the music.

TRIANGLE likewise mean a wooden instrument consisting of three poles which are fastened at top in such a manner, that they may spread at bottom in a triangular form, and by means of spikes affixed to each pole, remain firm in the earth. An iron bar, breast high, goes across one side of the triangle. The triangles are used in the British army for the purpose of inflicting the barbarous and unmilitary punishment of whipping; a usage which is rendered the more odious by a comparison of the valor and discipline of the French, who do not allow of any such punishments. To the shame of the United States, the practice is tolerated even by law at this moment!

Shake the TRIANGLE. A phrase in the British army, applied to the condition of a man who is whipped with corded lashes on the bare back till he falls into convulsions; when he is said to shake the triangle. Where such barbarity is the *costume* it is not surprising that they are always beaten in the field.

TRIANON, *Fr.* A generical French term signifying any pavilion that stands in a park, and is unconnected with the castle or main building. Of this description was the French queen's petit trianon in the neighborhood of Versailles.

TRIARII. Soldiers so called among the Romans. According to Kennett, the Triarii were commonly veterans, or hardy old soldiers, of long experience and approved valor. They had their name from their position, being marshalled in the third place, as the main strength and hopes of their party. They were armed with a pike, a shield, a helmet, and a cuirass. They are sometimes called *Pilarii*, from their weapon the Pila. See *Kennett's Roman Ant.* p. 190. They were likewise stiled *Tiertiarii*. A certain number of these veterans was always distributed in each cohort.

Polybius, in his 6th book, classes the Roman troops under four different heads; the first he calls *Pilati* or *Velites*, light-armed men, selected from the lower order of the people, and generally composed of the youngest men in the army. The second class, consisting of pikemen, *Hastati*, were more advanced in age, and had more experience. The third class, called *Principes*, were still older, and more warlike than the second.

The fourth class consisted of the oldest, most experienced, and bravest soldiers. These were always posted in the third rank, as a reserve, to support the others in case they gave way. Hence their appellation of *triarii* or *tiertiarii*; and hence the Roman proverb, *Ad triarium ventum est*, signifying thereby, that the last efforts were being made. The *triarii* were likewise named *post signani*, from being posted in the rear of the *princeps* who carried the standard in a legion.

TRIBUNE, (*Tribun*, Fr.) A title which was originally given to certain Roman magistrates, who were established for the specific purpose of maintaining the rights of the tribes or mass of the people, in opposition to the possible encroachments of the aristocracy or patricians, on which account they were stiled the tribunes of the people, *les tribuns du peuple*. The number, at first, was limited to two; but they were subsequently augmented to ten. There were likewise military tribunes, *tribuns militaires*. These held commands of considerable extent in the Roman armies.

TRIBUNATE, (*Tribunat*, Fr.) The office of tribune.

TRICKER, } (*Detênte*, Fr.) The
TRIGGER, } catch, which being pulled, disengages the cock of a gun-lock, that it may strike fire.

Hair TRIGGER, (*détente à chevaux*, Fr.) The hair trigger is generally used for rifles, when there is a great nicety required in shooting. The difference between a hair-trigger and a common trigger is this—the hair trigger, when set, lets off the cock by the slightest touch, whereas the common trigger requires a considerable degree of force, and consequently is longer in its operation.

TRICOISSES, *Fr.* Pincers used by farriers.

TRICOT, *Fr.* A cudgel.

TRICOLORE, *Fr.* Three-colored. Hence the tricolor-cockade, which was adopted by the French at the commencement of their revolution. It consists of *sky-blue*, *pink*, and *white*, and was emblematical of the three estates, nobility, clergy, and people. The armies still wear the tricolor, although the first order, or the nobility, was abolished 10th of August, 1792; however, Bonaparte has re-established a new nobility, and a new device on his standards, which is an eagle; conformable to his peculiar interests or policy.

TRIER, *Fr.* To pick and chuse. Hence, *trier les plus beaux soldats*, to pick out the finest soldiers. *Triage* is used as the substantive, signifying the act of picking and chusing.

TRIGON, a triangle. Hence,

TRIGONOMETRY, (*Trigonométrie*, Fr.) The art of measuring triangles, or of calculating the sides of any triangle sought. This is either plain or spherical.

TRILATERAL. Having three sides.

TRIMESTRE, *Fr.* A space of three months.

TRINGLE. In architecture, a name common to several little square members or ornaments, as reglets, listels, and platbands. It is more particularly used for a little member fixed exactly over every triglyph, under the platband of the architrave; from whence hang down the guttæ or pendent drops.

Tringle, *Fr.* A wooden rule.

TRINGLER, *Fr.* To draw a strait line upon wood by means of a stretched piece of packthread, or cord that is chalked.

TRINOME, *Fr.* A word used among the French, in algebra, to express any quantity which is produced by the addition of three numbers or quantities that are incommensurable.

TRINOMIAL, or **Trinomial** *root*, in mathematics, is a root consisting of three parts, connected together by the signs $+$ or $-$, as $x + y + z$, or $x - y - z$.

TRINQUET, *Fr.* A word used in the Levant to signify the mizen or foremast of a ship.

TRINQUETTE, *Fr.* A sail used on board the ships in the Levant, which is of a triangular shape.

TRIOMPHE, *Fr.* See Triumph.

Arc de **Triomphe**, *Fr.* A triumphal arch.

TRIPASTE, *Fr.* A machine which consists of three pullies, and is used in raising of heavy weights.

TRIQUE, *Fr.* A large cudgel.

TRIQUE-BAL, *Fr.* A sling cart or machine which is used to convey pieces of ordnance from one quarter to another.

TRIREME, *Fr.* A galley with three benches for rowers.

TRISECTION, (*Trisection*, Fr.) The division of a thing into three. The term is chiefly used in geometry for the partition of an angle into three equal parts.

The trisection of an angle geometrically, is one of those great problems whose solution has been so much sought by mathematicians; being in this respect on a footing with the quadrature of the circle, and the duplicature of the cube angle.

TRIUMPH. A solemnity practised by the ancient Romans, to do honor to a victorious general.

There were two sorts of triumphs, the greater and the lesser, particularly called ovation; of these the triumph was by much the more splendid procession. None were capable of this honor but the dictator, consuls, and prætors; though there are examples to the contrary, as particularly in Pompey the Great, who had a triumph decreed him when he was only a Roman knight, and had not yet reached the senatorial age.

The triumph was the most pompous show among the ancients: authors usually attribute its invention to Bacchus, and tell us, that he first triumphed upon the conquest of the Indies; and yet this ceremony was only in use among the Romans. The Grecians had a custom which resembled the Roman triumph; for the conquerors used to make a procession through the middle of their city, crowned with garlands, repeating hymns and songs, and brandishing their spears: their captives were also led by them, and all their spoils exposed to public view. The order of a Roman triumph was chiefly thus: the senate having decreed the general a triumph, and appointed a day, they went out of the city gate and marched in order with him through the city. The cavalcade was led up by the musicians, who had crowns on their heads; and after them came several chariots with plans and maps of the cities and countries subdued, done in relievo: they were followed by the spoils taken from the enemy; their horses, arms, gold, silver, machines, tents, &c. After these came the kings, princes, or generals subdued, loaded with chains, and followed by mimics or buffoons, who exulted over their misfortunes. Next came the officers of the conquering troops, with crowns on their heads. Then appeared the triumphal chariot, in which was the conqueror, richly clad in a purple robe, embroidered with gold, setting forth his glorious atchievements. His buskins were beset with pearl, and he wore a crown, which at first was only laurel, but afterwards gold; one hand held a laurel branch, the other a truncheon. His children were sometimes at his feet, and sometimes on the chariot-horses. As the triumphal chariot passed along, the people strewed flowers before it. The music played in praise of the conqueror, amidst the loud acclamations of the people, crying, to triumph. The chariot was followed by the senate clad in white robes; and the senate by such citizens as had been set at liberty or ransomed. The procession was closed by the sacrifices, and their officers and utensils, with a white ox led along for the chief victim. In the mean time all the temples were open, and the altars were loaded with offerings and incense; games and combats were celebrated in the public places, and rejoicings appeared every where.

TRIUMVIRI, or **TRESVIRI CAPITALES**. Men employed among the ancient Romans to preserve the public peace, &c. For particulars, see Kennett's Roman Antiquities, page 121. They likewise signify the three persons, Cæsar, Crassus, and Pompey, who seized on the government of the republic, and divided it among them. Hence,

TRIUMVIRATE (*Triumvirat*, Fr.) An absolute government administered by three persons with equal authority. There are two triumvirates particularly recorded in history: Pompey, Cæsar, and Crassus, who had all served the republic as generals of marked reputation,, in the first instance; and Augustus, Mark Antony, and Lepidus, in the second.

TROCHLEA. One of the mechanical powers usually called a pulley.

TROCHOID, in mathematics. The same as cycloid.

TROCHOLIQUE, *Fr.* A name used among the French for that branch of mathematics which treats of circular movements.

TROMBE, *Fr.* A water-spout. It is likewise called *Siphon* or *Syphon*.

TROMPE, *Fr.* In architecture; an arch which grows wider towards the top.

TROMPES, *Fr.* In artificial fireworks; a collection of *pots à feu*, or fire-pots so arranged, that upon the first being inflamed, a ready communication takes place with the rest, and the explosion is successively effected.

TROMPETTE, *Fr.* This word, which signifies trumpet, is applied by the French, not only to the instrument, but to the man who blows it; in the same manner that we say fifes and drums, for fifers and drummers; but we do not say trumpet for trumpeter. *Trompette*, when used in this sense, is of the masculine gender.

TROMPETTE *sonnante*, Fr. With sound of trumpet, or trumpet sounding.

TROMPETTE *parlante*, Fr. A speaking trumpet. This instrument is generally used at sea; and owes its invention to an Englishman.

Deloger sans **TROMPETTE**, Fr. To steal away, to take French leave.

TROMPILLON, *Fr.* The diminutive of trompe. A term used in architecture, which owes its origin to the resemblance that exists between the wide part of a trumpet, and the arch or vault so called.

TROOP, in cavalry. A certain number of men on horseback who form a component part of a squadron. It is the same, with respect to formation, as company in the infantry. When a troop dismounts and acts on foot, it is still called a troop.

TROOP. A certain beat of the drum. See **DRUM**.

To **TROOP** *the colors.* See **COLORS**.

TROOPS. The same as *copiæ* in Latin. Any collective body of soldiers.

Heavy **TROOPS.** Soldiers armed and accoutred for the purpose of acting together, in line, &c.

Light **TROOPS**, (*Troupes legères*, Fr.) Hussars, light horse, mounted riflemen, light infantry are so called, in opposition to cavalry or heavy horse. Skirmishing is solely the business of light horse, who, according to count Turpin, should be constantly exposed as the forlorn hope of the army; or as troops whose duty it is to be continually watchful for its repose and security.

When the light horse compose an advanced camp, the men should keep their horses constantly saddled; it being only an indulgence to allow those off duty to have their horses unsaddled. It is very true, that a camp of cavalry cannot be managed after the same manner; but then cavalry is seldom so situated as to be attacked, or to attack every day, which is the real business of light horse. They should serve as vedets to the whole army, in order to prevent the enemy from approaching it; whereas cavalry should never be employed, but in the greatest operations; and on occasions which are to decide the fate of a campaign.

Light troops, according to the same writer, are employed to gain intelligence concerning the enemy, to learn whether he hath decamped, whether he hath built any bridges, and other things of the same nature, of which the general must necessarily be informed, and should have a day fixed for this return. There are other detachments, which should be sent out under intelligent officers, and which should never lose sight of the enemy, in order to send in daily intelligence, to attack small convoys and baggage, to pick up marauders, and harrass the advanced guards. There should not be any time fixed for the return of these detachments, neither should they be confined to particular places; they should, however, return to the camp at the expiration of eight or ten days at farthest. The inconvenience, arising from confining these detachments to a particular time, would perhaps be, that the very day appointed for their return, would be that on which they might have the fairest opportunity of learning intelligence of the enemy: consequently their being forced to return, would defeat the objects for which they were sent out. See page 122, vol. II. of Count Turpin's Art of War. See *Am. Mil. Lib.*

Light TROOPS have been sometimes called irregulars, as they act in detached and loose bodies. The tirailleurs, Tyrolians, Yagers, sharp-shooters, and the *Chasseurs a cheval et a pied*, to which the French owe so much during the whole course of their stupendous revolution, were of this description. What was called advancing *en masse*, by the French, was nothing more than very large bodies of irregulars (or light troops), which covered the country, in the front of their armies, like an inundation. To their irregulars, and to their light artillery are the French indebted for most of the victories they have gained. The troops stiled in France chasseurs, are, more or less, to be met with in every service in Europe, except the British. The Austrians have many regiments of them; the Prussians have them attached, in a certain proportion, to each corps; but the French, seeing the good effect of these irregulars, have brought them more into the field than all the combined powers together.

The operations in the spring of 1794, were in an open country near Cambray; the French then felt the superiority of the enemy's cavalry; and saw that the irregulars, with which the French army abounded, were useless, and would continue so, unless they could force the British to make war in an enclosed country; and this they effected by obliging them to return into Flanders, to protect their magazines, and cover their communication with them. That country is much inclosed; and there all the irregulars could act. From that hour the British constantly lost ground, holding only those points they thought proper to cover with works; and in the short space of a few weeks, it may be said in a few days, those armies which had been acting offensively, were actually obliged to act defensively. Was that army diminished by slaughter or sickness? No: but the French armies, it is said, were increased: true; and with what? Irregulars: requisition men or volunteers; first without discipline, but not without ardor to fight: and from the moment the British commenced their sad retreat from Tournay, till they arrived near Breda, nothing was to be seen but the French irregular troops, that is tirailleurs or riflemen.

TROOPER, (*Cavalier*, Fr.) A horse soldier. According to Dr. Johnson, a trooper fights only on horseback; a dragoon marches on horseback, but fights either as a horseman or footman. There is no such thing as a trooper in the British service. The Blues were the last corps that deserved that appellation; but they now act, like the rest of the cavalry, on foot.

TROPHEE, *Fr.* See TROPHY.

Faire TROPHEE, Fr. To glory in.

TROPHY. Something taken from an enemy, and shewn or treasured up in proof of victory. Among the ancients, it consisted of a pile or heap of arms of a vanquished enemy, raised by the conqueror in the most eminent part of the field of battle.

The trophies were usually dedicated to some of the gods, especially to Jupiter. The name of the deity to whom they were inscribed, was generally mentioned, as was that also of the conqueror. The spoils were first hung upon the trunk of a tree; but instead of trees, succeeding ages erected pillars of stone or brass, to perpetuate the memory of their victories. To demolish a trophy was looked upon as a sacrilege, because they were all consecrated to some deity.

TROPHY-*money*. Certain money annually raised in several countries towards providing artillery harness, and maintaining the militia.

TROPIQUE, *Fr.* Tropic. It is likewise used as an adjective, and signifies tropical.

Baptême du TROPIQUE, *Fr.* The ceremony which is performed when a person crosses the line for the first time.

TROSSERS, } a kind of breeches
TROUSE, } reaching down to the
TROWSERS, } ankles, worn by some regiments of infantry and light cavalry. See PANTALOON.

TROTTOIR, *Fr.* Footway. It more properly means a raised pavement on the sides of a street or bridge, for the convenience of foot passengers.

TROU, *Fr.* A hole.

TROU *de mineur*, Fr. A lodgement which is made for the safety and convenience of a miner, when he first begins his operation.

TROU *de loup*. A cone reversed. Diameter of the base 4 feet 6 inches: depth 6 feet; picket 6 feet long, and from 4 to 5 inches square; contain ¾ of a cubic fathom of earth, and are usually placed 2 in 3 fathoms.

TROUBLESOME, from the verb to trouble. Importunate, teazing, full of molestation. This word is frequently misapplied in military matters. Many officers who have the public service of their country at heart, are improperly called *troublesome*, because they will not add, by negligence or connivance, to the too frequent abuses which exist in the interior economy of military establishment.

TROUGH. A hollow wooden vessel to knead bread in. It is used among the utensils of field bakery.

TROUPES, *Fr.* Troops, forces.

TROUPES *legeres*, Fr. Light troops.

TROUS-DE-LOUP, in field fortifications, are round holes, about 6 feet deep, and pointed at the bottom, with a stake placed in the middle. They are frequently dug round a redoubt, to obstruct the enemy's approach. They are circular at the top, of about 4½ feet diameter.

TROUSSE, *Fr.* A quiver. It also signifies any bundle of things tied together, viz. *Une trousse de foin*, a bundle of hay. See TRUSS.

TROUSSEAU, *Fr.* A long piece of wood in the shape of a cane, that is, having one end smaller than the other, which is used in foundries to make cannon-moulds.

TROUSSEPAS, *Fr.* A sort of iron spade which is used in cutting turf.

TRUCE, (*Treve*, Fr.) A suspension of arms, or a cessation of hostilities, between two armies, in order to settle articles of peace, bury the dead, &c.

TRUCK. Wooden wheels for the carriage of cannon, &c.

TRUCKS of a ship-carriage, are wheels made of one piece of wood, from 12 to 19 inches diameter; and their thickness is always equal to the calibre of the gun.

The trucks of garrison-carriages are sometimes made of cast iron.

A truck-carriage goes upon four trucks of 24 inches diameter; has two flat side pieces of ten inches broad, and serves to carry guns, ammunition boxes, or any other weights, from the store houses to the water side, or to any small distance.

To TRUCKLE. This word is adopted from the trucklebed, which is a low mean bed that can be pushed under another. Hence,

To TRUCKLE TO. To submit to; to allow the superiority of another.

TRUEBORN. According to Dr. Johnson, having a right by birth to any title.

TRUELLE, *Fr.* A trowel.

TRULL. A vagrant strumpet; or one that has promiscuous dealings upon the road or elsewhere, with men of all descriptions. Hence, a soldier's trull. In every well regulated camp and garrison the utmost precaution should be taken, to prevent these wretches from having the least intercourse with the soldiery. Notwithstanding the presumed, or reputed immorality of the French nation, the strictest regard was paid to the character and health of their armies. During the monarchy, prostitutes were publicly exposed upon a wooden horse. See CHEVAL DE BOIS.

TRUMEAU, *Fr.* In architecture, the space in a wall which is between two windows. It also signifies a pier-glass.

TRUMPET, or *Trump.* A wind instrument made of brass or silver, with a mouth piece to take out and put in at pleasure. Each troop of cavalry has one.

TRUMPETER. The soldier who sounds the trumpet.

TRUMPET *Soundings.* See SOUNDINGS.

TRUNCHEON. A club; a cudgel; also a staff of command. The *truncheon* was for several ages the sign of office; generals were presented with the truncheon as the sign of investiture with command; and all those officers who belonged to the suite of the general, and were not attached to regiments, carried a *truncheon* or *staff*, whence the name of officers of the *staff*. See BATOON.

To TRUNCHEON. To beat with a truncheon. Dr. Johnson has quoted a passage out of Shakespeare, which is extremely apposite to those blustering imposing characters that sometimes annoy public places, and commit swindling acts of depredation under the assumed title of captain. *Captain! thou abominable cheater! if captains were of my mind, they would truncheon you out of taking their names upon you before you earned them!*

TRUNCHEONEER. One armed with a truncheon.

TRUNNIONS, in guns. Two cylindric pieces of metal in a gun, mortar, or howitzer, which project pieces of ordnance, and by which they are supported upon their carriages. See CANNON.

TRUNNION-*plates*, are two plates in travelling carriages, mortars, and howitzers, which cover the upper parts of the side-pieces, and go under the trunnions. The French have made improvements on this article; they have two pair of *trunnion* plates; one pair, in which the gun is placed for *action;* the gun is removed into the other for *travelling;* and are so denominated. See *Am. Mil. Lib.*

TRUSQUINS, *Fr.* Tools made use of by carpenters and joiners. They are called *trusquins d'assemblage*, and trusquins *à longue pointe.*

TRUSS. A bundle; as a bundle of hay or straw. Any thing thrust close together. Trusses of this description have been sometimes used in military affairs. The men carrying them in front for the purpose of deadening shot.

TRUSS *of forage*, is as much as a trooper can carry on his horse's crupper. See SPUN HAY.

To TRUST. To give credit to, on promise of payment. No soldier shall be liable to be arrested for a sum under 20*l.* and then an oath of the debt must be made before a magistrate.

TRUSTY. Honest; faithful; true; fit to be trusted. This word is used in the preamble of military commissions, &c. viz. To our *trusty and well beloved.*

TUBE, *Fr.* A pipe, a siphon. It is particularly applied to optical instruments.

TUBES of tin plates are the best for service. Tubes must pass through a guage of 2-10 of an inch diameter. The composition is mealed powder, mixt up stiff with spirits of wine. They are made up in bundles of 100 each.

Length of tin tubes.

Length.	Kind of Ordnance.					
	Heavy.	Medium.	Light.	Howitzer.	Land Mortars.	Sea Mortars.
Inches.	Pr.	Pr.	Pr.	Inch.	Inch.	In.
12·2	—	—	—	—	—	13
8·8	24	24	—	—	—	—
8·2	18	18	—	—	—	—
7·75	12	12	—	—	13	10
6·8	9	9	—	—	—	—
6·5	6	—	24	8	10	—
5·9	3	6	12	5½	—	—
5·0	—	—	—	—	8	—
4·75	1½	1½	6	—	—	—
4·2	—	—	—	4 2-5	5½	—
3·6	—	—	—	—	4 2-5	—

If tin tubes get damaged by wet, the composition may be cleared out of them, and they may be fresh filled. If spirits of wine cannot be had, good rum or brandy will answer the purpose.

TUCDUMMA, *Ind.* An account which is closed, after it has been examined.

TUCK. A long narrow sword.

TUDESQUE, *Fr.* Teutonic; Germanic.

TUERIE, *Fr.* Slaughter; massacre.

TUF. A soft sandy stone which answers two purposes, either to build upon or to build with. It is likewise *tufeau.* The French say, figuratively, *C'est un homme de tuf*—He is a man of no depth or profound knowlege.

TUG, *Fr.* A Turkish term for tail; a sort of standard called so by the Turks. It consists of a horse's tail which is fixed to a long pole or half pike, by means of a gold button. The origin of this standard is curious. It is said, that the Christians having given battle to the Turks, the latter were broken, and in the midst of their confusion lost their grand standard. The Turkish general, being extremely agitated at the untoward circumstances which happened, most especially by the loss of the great standard, cut off a horse's tail with his sabre, fixed it to a half pike, and holding it in his hand, rode furiously towards the fugitives and exclaimed—*Here is the great standard; let those who love me, follow into action!* This produced the desired effect. The Turks rallied with redoubled courage, rushed into the thickest of the enemy, and not only gained the victory, but recovered their standard. Other writers assert, that six thousand Turks having been taken prisoners during a general engagement, contrived to escape from their guard or escort, and afterwards fought so gallantly, that they regained another battle; that in order to recognize one another, they cut off a horse's tail which they carried as a standard; that when they joined the Ottoman army, they still made use of the tug or tail; that the Turks, in consequence of the victory which was obtained under this new standard, looked upon it as a happy omen; and that since that period they have always fought under it as their banner, and the signal of success.

Whatever may have been the origin, it is certain, that when the Grand Signor takes the field in person, seven of these tails are always carried before him; and when he is in camp, they are planted in front of his tent.

The Grand Visier is entitled to three of these tails.

The three principal bashaws of the empire, (viz. those of Bagdad, Grand Cairo, and Breda,) have the grand signor's permission to use this mark of distinction, throughout the whole extent of their jurisdiction.

Those bashaws that are not visiers, have the privilege of having two tails.

The beys, who are subordinate to the bashaws, have only one.

In the bas-relievo which is under the tomb-stone of John Casimir, king of Poland, in the abbey church of St. Germain, *des Prés des Paris*, that monarch is represented at the head of his cavalry, with a horse's tail or tug for its standard.

TUGPINS, are the iron pins which pass through the fore end of the shafts of the army carts, to fasten the draught chains for the fore horses.

TUILE, *Fr.* A tile.

Tuile *creuse*, Fr. A gutter tile.

Tuile *de petit moule*, Fr. A tile measuring about ten inches in length, and six in breadth. About 300 cover a square toise.

Tuile *de grand moule*, Fr. A tile measuring about 13 inches in length, and about eight and a half in breadth. One thousand are sufficient to cover seven toises.

TUILEAU, *Fr.* Shard of a tile.

TUILERIE, *Fr.* Tile kiln.

TUILERIES, *Fr.* The gardens belonging to the ci-devant royal palace in Paris, are so called, from the spot having originally been used for tile-kilns.

TUKKEKYAH, *Ind.* Carpenters.

TUKNAR JUMMA, *Ind.* Money brought more than once to account.

TULUBANA, *Ind.* A fee, taken by Peons when placed as guards over any person.

TULLUB, *Ind.* This word literally means a demand; but it also signifies *wages, pay.*

Tullub *chitty*, Ind. A summons for *pay.*

TULWAR, *Ind.* A sword.

TUMBRELS, (*Tombereaux*, Fr.) Covered carts, which carry ammunition for cannon, tools for the pioneers, miners, and artificers; and sometimes the money of the army.

TUMSOOK, *Ind.* A bond.

TUNKAW, *Ind.* An assignment.

TUNES, *Fr.* Small twigs which are inlaced, or twisted across around several stakes planted in the earth, and which serve to keep the fascines together.

TUNIC, (*Tunique*, Fr.) A coat with short sleeves above the elbow; a tunic. It derives its name from the Latin word *Tunica*, a close coat, which was the common garment worn within doors by itself, and abroad under the gown. It was distinguished by different names among the Romans, corresponding with the several classes of the people that were clothed according to their rank in life. See *Kennett's Roman Antiquities*, p. 311, &c.

This sort of clothing is still worn in the east, and was prevalent among the French after their return from the crusades to the Holy Land. They adopted it from the Saracens, and seemed ambitious of appearing in a garb which bore testimony to their feats of valor. These tunics, which were converted into a sort of uniform, obtained the name of *Saladines* among the French, in compliment to the emperor Saladin. Hence too the origin of *Salade*, which not only signified the armor that was worn beneath the *tunic* or *saladine*, but also the light helmet of that name.

TUNIQUE, *Fr.* Among the French signifies likewise a particular dress which was worn by the kings, under their robes of state at a coronation.

TUNTUNGI-*Basbi.* A Turkish term signifying master of the pipes, a situation under the pacha.

TUQUE, *Fr.* A tarpaulin.

TURBAN, TURBANT, TURBAND, (*Turban*, Fr.) A cover consisting of several folds of white muslin, &c. which was worn by the Turks and other oriental nations. The blacks belonging to the different bands that are attached to British regiments likewise wear turbans, ornamented with fictitious pearls and feathers. Those of the foot guards are particularly gorgeous. The French say familiarly *Prendre le Turban*, to turn Turk.

The great Turk bears over his arms a turban enriched with pearls and diamonds, under two coronets. The first, which is made of pyramidical points, is heightened up with large pearls, and the uppermost is surmounted with crescents.

Green TURBAN. A turban worn by the immediate descendants of Mahomed, and by the idiots or saints in Turkey.

White TURBAN. A turban generally worn by the inhabitants of the East.

Yellow TURBAN. A turban worn by the Polygars who are chiefs of mountainous or woodland districts in the East Indies. By the last accounts from India, this turban has been adopted by the revolted natives of that part of the globe, as a signal of national coincidence and national understanding. The Polygars are in possession of very extensive tracts of country, particularly among the woods and mountains, and are likely to be extremely troublesome to the British. For an interesting account of them see *Orme's History of the Carnatic*, pages 386, 390, 396, 420, &c.

TURCIE, *Fr.* Mole; pier; dyke.

TURK, (*Turc*, Fr.) The following account of the Turks has been given by a modern French writer:—"The Turks are a nation that is naturally warlike, whose armies are commanded by experienced generals, and are composed of bold and executive soldiers. They owe their knowlege of war, and their experience in tactics to three national causes, two of which do credit to their intellects. In the first place, they become enured to arms, from being bred to the profession from their earliest infancy: in the second, they are promoted upon the sole ground of merit, and by an uninterrupted gradation of rank: and in the third, they possess all the opportunities of learning the military art that constant practice and habitual warfare can afford. They are naturally robust, and constitutionally courageous, full of activity, and not at all enervated by the debaucheries of Europe, or the effeminacy of the East. Their predilection for war and enterprise, grows out of the recollection of past victories, and is strengthened by the two most powerful incentives to human daring, viz. reward and punishment; the first of which is extremely attractive, because it is extremely great, and the other equally deterring, because it is rigorous in the extreme. Add to these the strong influence of a religion, which holds out everlasting happiness and seats near Mahomed in heaven, to all who die fighting for their country on the field of battle; and which further teaches them most implicitly to believe, that every Turk has written upon his forehead his fatal moment, with the kind of death he must submit to, and that nothing human can alter his destiny. When any thing is to be put into execution, the order they receive is absolute, free from every species of intervention or control, and emanating from one independent authority. The power which is entrusted to their generals (like that of the Romans to their dictators) is brief and comprehensive, viz.—"Promote the interests of your country or your sovereign." See *Essai sur la Science de la Guerre*, tom. i. p. 207.

Such is the character of the Turks, as detailed by their old allies the French. How far it corresponds with reality, especially in regard to military knowlege, we must leave to future historians to determine; observing at the same time, that a few sparks of British valor and perseverance have contributed more to the preservation of the Ottoman empire, during the present war, than all the fantastic images, or well-devised hypocrisies of Mahomed could have done. Our brave countrymen, on their return from Egypt, will probably be enabled to give a more faithful and correct account of their characters as soldiers.

TURMA. A troop of cavalry among the ancient Romans. The horse required to every legion was three hundred, divided into ten turmæ or troops, thirty to a troop, every troop making three decuriæ, or *squads*. See *Kennett*, R. A. p. 192.

TURNCOAT. A renegade, a deserter; one who abandons his party.

TURNOVER. A piece of white linen which is worn by the soldiers belonging to the British cavalry over their stocks, about half an inch deep.

To TURN *out*. To bring forward, to exhibit; as, to turn out the guard; to turn out so many men for service.

To TURN *in*. To withdraw; to order under cover; as, to turn in the guard.

TURNPIKE, (*Barriere*,) Fr. An obstacle placed across a road to prevent travellers, waggons, &c. from passing without paying an established toll. British officers and soldiers regimentally dressed, and on duty, pass through turnpikes gratis.

TURNPIKE is also used in the military art, for a beam stuck full of spikes, to be placed in a gap, a breach, or at the entrance of a camp, to keep off the enemy. It may be considered as a sort of *cheval de frize*.

TURPENTINE. A very combustible resin, much used in the composition of fire-works. All resins are discriminated from gums, by being soluble in oil but not in water; gums the contrary.

TURRET. A small tower.

Moveable TURRETS. See TOWERS.

TUSSULDAR, *Ind*. The East India company's collector of the kistybundy.

TUYAU, *Fr*. Any pipe, &c. of lead, or gutter, or canal, made of burnt clay, &c. which serves to carry off the water from the roof of a house.

TUYAU *de cheminee*, Fr. The cylindrical conduit which receives and lets out the smoke at the top of a chimney.

TUYAUX *de descente*, Fr. The pipes which convey the water downwards.

TYMPAN, (*Tympan*, Fr.) In architecture, the area of a pediment, being that part which is on a level with the naked part of the frize. Or it is the space included between the three cornices of a triangular pediment, or the two cornices of a circular one.

TYMPAN *of an arch*, is the triangular space or table in the corners or sides of the arch, usually hollowed and enriched, sometimes with branches of laurel, olive-tree, or oak, or with trophies, &c. Sometimes with flying figures, as fame, victory, &c. or sitting figures, as the cardinal virtues.

TYMPANUM. A drum, a musical instrument which the ancients used, and which consisted of a thin piece of leather or skin, stretched upon a circle of wood or iron, and beat with the hand. Hence the origin of our drum.

TYMPANUM. In mechanics, a kind of wheel placed round an axis or cylindrical beam, on the top of which are two levers, or fixed staves, for the more easy turning the axis about, in order to raise a weight required. It is also used for any hollow wheel, wherein one or more persons or animals, such as horses, dogs, &c. walk to turn it. This wheel is found in cranes, calenders, &c.

V

VACANCY, (*vacance*, Fr.) State of an office or commission to which no one is appointed.

VACANT, (*Vacant*, *e*. Fr.) Empty; not filled.

VACANT *Companies*, (*Compagnies vacantes*, Fr.) Companies to the permanent command of which no person is appointed.

Emplois-VACANS, *Fr*. During the French monarchy, seniority of rank or standing did not give the right of promotion. It belonged solely to the king to appoint and nominate all persons to vacant commissions or employments. No other rule can be consistent with the efficiency of a military institution; rotation should be considered only as a contingency, which is only admitted, not permanently established; as no institution so much calls for *merit* and *application* to study, as the military profession; merit alone should be the foundation of promotion; then all would endeavor to acquire knowlege; where rotation exists there is no incitement. In the American army, no attention is paid to merit; there is, therefore, very little study.

VACCINE *pock*, a disease which has been found to affect the cow on the teat or udder, which arises in pustules resembling small pox; it has been found that this is a perfect preventive of small pox and is now growing into use against prejudice among all civilized nations. All armies should undergo the vaccine inoculation, to prevent the ravages of small pox; one half of the American army that went against Quebec in 1775 was swept off by small pox.

VAGUE-*Mestre*, Fr. See WAGGON-MASTER.

VAISSEAU, *Fr*. Ship.

VAISSEAU *du premier rang*, Fr. A first rate.

VAISSEAU *du second rang*, Fr. A second rate.

VAISSEAU *de guerre*, Fr. A man of war.

VAISSEAU *Marchand*, Fr. A merchant-man.

VAISSELLE *d'Argent*, Fr. Silver utensils; plate. We have already remarked under *Table d'Officiers*, that during the old government of France, it was strictly forbidden to use any other plate than silver goblets, spoons, and forks.

VAIVODE, *Fr.* An old Sclavonian word, which signifies prince or general. This title was formerly given to the sovereign princes of Wallachia, Moldavia, and Transylvania.

VAJIB UL ARZEE, *Ind:* A petition, memorial, or proposal to a superior.

VAKEEL, *Ind.* An agent—deputy—attorney—a subordinate envoy or ambassador.

VAKIAS, *Ind.* A weight nearly equal to a pound: It also signifies a measure.

VAKILIT, *Ind.* The first office in the empire.

VALET, *Fr.* An instrument which is used by carpenters to keep boards, that have been glued, close together.

VALETS *de l'Armee*, Fr. Officers' servants; they are likewise called by the French, Tartares. In the American army, *waiters.*

Valets d'Artillerie, Fr. Men attached to the guns on board ships of war, for the purpose of assisting the regular cannoneers. In the American service they are classed by numbers and called, *first*, *second*, or *third* AIDS.

Valet à Patin, Fr. An instrument which is used by surgeons—A small pincer to take up the arteries when it is found necessary to make a ligature.

VALIANT, } personally brave,
VALOROUS, } fearless of danger in war, &c.

VALLEY, (*Val*, Fr.) A hollow space of ground, generally between hills.

VALOR, (*Valeur*, Fr.) Courage, bravery, intrepidity. A generous quality, which, far from assuming brutality and violence, with-holds the fury of the soldier, protects helpless women, innocent infants, and hoary age. Nothing which is incapable of resistance, can ever be the object whereon true valor would exercise its prowess. Courage is that grandeur of soul, which prompts us to sacrifice all personal advantages, and even the preservation of our beings, to a love of our country and its liberty. The exercise of this determined courage in the profession of arms, is called *valor.* It is composed of bravery, reason, and force: by bravery we understand that lively ardor which fires us for the combat; reason points out to us the method of conducting it with justice and prudence; and force is necessary for the execution. It is bravery which animates the heart, reason springs from the soul, and force depends upon the body; without bravery we fear obstacles, danger, and death; without reason, courage would have no legitimate view; and without force it would be useless: these three qualities should concur to form the true military valor.

Dr. Johnson defines valor, bravery, and courage almost as synonymous terms. Mr. Addison distinguishes between that sort of courage which springs, by instinct, from the soul, and from that which originates in a sense of duty, and is strengthened by reflexion. Count Turpin, on the other hand, establishes a wide difference between bravery and courage, which he makes two terms. In page 5, of the preliminary discourse to his Essay on the Art of War, he has the following passage:

"Is the officer—speaking of the requisite qualifications in a general—who loves his duty, and who would make himself master of it, under no obligation to ascertain what qualifications his station requires? That he ought to have such or such a quality, under such or such a circumstance? That here only bravery is necessary, there only courage? And that he is not always obliged to have both at the same time?"

These two qualities, which are often confounded in the same subject, merit a particular distinction; they are not so closely united, but that one may be found without the other. Courage seems fittest for a general, and for all those who command; bravery more necessary for a soldier, and for all those who receive orders; bravery is in the blood; courage in the soul; the first is a kind of instinct, the second a virtue; the one is an impulse almost mechanical, the other a noble and a sublime conception. A man is brave at a particular time, and according to circumstances; but he has a courage at all times, and upon all occasions: bravery is impetuous, in as much as it is less the result of reflexion; courage, on the contrary, in proportion as it grows out of reason, becomes more or less intrepid. Bravery is inspired by the force of example, by insensibility of danger, and by the mingled fury of conflict and action; courage is infused by the love of our duty, the desire of glory, and by the zeal we feel to serve our country: courage depends on reason, but bravery on the constitution. Achilles, such as Horace describes him from Homer, implacable, cruel, despising every law except that of the strongest! presents nothing to the idea, but the hardiness of a gladiator. But the Roman general, whose death would have occasioned the ruin of the army, the great Scipio, when covered by the bucklers of three soldiers, to avoid a shower of arrows, which the enemy directed against him, approaches in safety the walls he besieged, and standing only a spectator of the action, exhibits the picture of true courage, whilst he contents himself with giving the necessary orders. Bravery again, is involuntary, and does not depend wholly upon ourselves; whereas courage (as Seneca observes) may be acquired by education; provided nature has sown the first seeds of it. Cicero, sheltering himself from the hatred of Cataline, undoubtedly wanted bravery; but certainly he possessed an elevated firmness of mind (which is in reality courage) when he disclosed the conspiracy of that traitor to the senate, and pointed out all his accomplices; or when he pleaded for Deiotarus against Cæsar, his friend and his judge.

Coolness is the effect of courage, which knows its danger, but makes no other use of that knowlege, than to give directions with greater certainty; courage is always master of itself, provided against all accidents, and regulated by existing circumstances; never confounded by any danger, so as to lose sight of the motions of the enemy, or of the means by which he may be most effectually opposed:

The chevalier Folard makes the following remarks upon this quality of the mind and heart. He says, in his notes on Polybius, there are various kinds of that species of courage, intrepidity, or strength of soul, which no circumstances can vanquish, and no events can shake. I do not know whether a quality, so diversified in its nature, can be found united in the same person to the full extent of its activity. We generally, discover that some men possess a larger proportion of it than others.

In order to form a correct opinion of its existence in the human character, we should find out some individual who had acted through all the vicissitudes of life, and had uniformly discovered the same firmness of mind and intrepidity of heart. But where shall we pick out a character of this sort? Life is too short for the full exercise of its various powers, and were it of a longer date, the circumscribed faculties of man render the research useless. I do not believe it possible to point out an individual who, free from the natural weaknesses that are attached to our constitution, has in adversity as well as prosperity been equally firm, and equally determined throughout all the changes to which military operations are unavoidably subject.

This intrepidity and strength of mind, have been peculiarly visible on manifold occasions in some extraordinary characters, who have been equally remarkable on others for weakness and pusillanimity. We have seen them bold to the full extent of hardihood during a succession of triumphs; we have then beheld them shamefully agitated under a temporary reverse of fortune, and we have again seen them recover their wonted energy on the first favorable opportunity. These opposite qualities succeed one another; and we see boldness and timidity occupy by turns the same man, so as to produce, according to circumstances, the utmost solicitude and caution in some instances, and the greatest courage, firmness, and decision in others, during the prosecution of a war.

These fluctuations of the human character may be traced, almost every day, in a certain description of generals. When they are reduced to defensive operations, their understanding becomes perplexed; they know not how to act, and not only omit to make use of favorable opportunities themselves, but unwittingly afford them to their enemies; whilst, on the other hand, in offensive war, their genius expands itself into a variety of expedients; they create occasions that did not seem to exist, turn them to account, and finally succeed. Thus we see united in the same men, promptitude, vigor, and enterprize in one species of warfare; and timidity, doubt, and consternation in another.

I have known, says Folard, generals of marked intrepidity, (who in trifling matters have discovered a solicitude that approaches to a want of manliness) conceive projects of vast extent, that were full of intricate developements, and chequered by incertitude; and I have seen them conquer the greatest obstacles by their courage and good conduct.

Human nature is so strangely constituted, that whilst one man will rush into danger, as if attracted by blood and devastation, another will not have firmness enough to stand his ground, and face the coming evil. He, who in the hour of battle would give fresh courage to his troops, by being the foremost to advance, has been known to turn pale in the very trench where a soldier's boy or woman has sat undisturbed selling spirits and provisions, or has been discovered to tremble when the signal for storming was given. The very man that would courageously lead his troop into action, or would prove the most expert marksman in the world, were he directed to practise in the front of a whole line, has been known to shrink at a single combat, and would rather rush headlong into a guarded breach, than measure swords or point a pistol with an antagonist. Another again, whom no danger could affect in public contests or in private feuds, when visited by sickness is full of apprehension, has recourse to physic, and in proportion as his malady increases, grows timid, scrupulous, and unhappy. It sometimes happens, on the other hand, though rarely, that the rankest coward will lie peaceably in bed amidst all the surrounding terrors of dissolution, and will even smile as his agony approaches.

I have seen, continues the same author, (and daily experience confirms his observation) one of the bravest officers in the world, suddenly turn pale in a thunder-storm, and even so far give way to his fears, as to hide himself in a cellar. One man possesses what the French so forcibly stile *une valeur journalière*, a sort of ephemeral courage, or what depends upon the influence of the moment; to-day he is as bold as Achilles; to-morrow he sinks into the degraded character of Thersites.

It is related of general Cadwallader, a man of unconquerable intrepidity in the field, that he trembled at the sight of a cat. The editor of this work had a friend a lieutenant *Muloch*, in the Bengal army, a man of tried valor whose antipathy was of this singular kind, that he could not eat if there was a shoulder of mutton on the table; at a card party at Lady Oakley's, at Madras, a shoulder of mutton was, without his knowlege, placed under his chair, the effect was, he fell from his chair in a state of convulsion from which he did not recover for several hours. The great *Condé* laughed at a man who said he never felt the sensation of fear, by asking him "have you never snuffed a candle *with your naked fingers?*" Going into action one of his friends observed to him, "My prince you tremble." He replied, "My body trembles for the danger into which my soul will lead me." The peculiarities of this celebrated hero were, that he was always affected in his nerves by any surprize, but never lost his presence of mind; some of his friends attempted to surprize him in his tent, and in Austrian uniform made their way to his bed side and awoke him with their noise; he turned round and observed, "If you had excited an emotion of fear in me I should instantly put you to death." Count Turpin, in his Art of War, appears to think that valor which unites deliberation and prudence is preferable to mere muscular bravery. The French pay more attention to the former than the latter, they always reward *bravery* but prefer *valor*. Mere animal courage is not sufficient for them, and speaking of those who possess bravery without discretion, they treat it as if mere animal bravery was common to all men, but valor or discrimination rare; hence they say of a merely brave man—*Il est brave comme mon épée, mais general* ****—namely a brainless part of the body.

These changes in the character and constitution which are so visible in individuals, may be traced in their influence over whole nations, with little or no deviation. The Persian cavalry still maintains its ancient reputation for valor, and is still dreaded by the Turks. Tacitus relates, that the Sarmatian horse was invincible, but when the men were dismounted, nothing could be more miserably defective in all the requisites of war. Their whole dependence was on their cavalry, and, as far as we are enabled to judge, the same partial quality exists to this day.

The French, until the present revolution, seemed to have preserved the character and disposition of the ancient Gauls. They went with more alacrity into action, and met death, at first sight, with more valor, than they discovered firmness and resolution to wait patiently for its approach. Hurry and agitation appeared more congenial to their minds, than calmness and composure.

In order to conquer, it was found necessary, by their ablest generals, to make them attack and insult their enemy. They grew impatient in slow operations, and gradually became less capable of meeting their antagonists in proportion to the time they were restrained from coming to action. Their whole history, indeed, is a continued proof of the justness of this observation; and although their character seems to have undergone considerable changes since their revolution, they have still retained so much of the original cast, as to shew more promptitude in offensive, than steadiness and perseverance in defensive operations. Not that they are deficient in the latter, but that the former quality has been more brilliantly successful. To the first they owe their stupendous triumphs under Bonaparte; but they have again been rendered almost equally conspicuous by their conduct in the second under general Moreau, in his celebrated retreat from the Black Forest. But, alas! of what avail is the courage of the multitude, if the generality of their leaders are deficient in those indispensible qualities by which French officers have acquired the greatest reputation. It is like a torch in the hands of a fool or madman, who would as soon lead an enthusiast to a precipice, as he would shew him the paths he ought to tread.

VALUE, in a general acceptation of the term, signifies the rate at which any thing is estimated.

VAN. The front of an army, the first line; or leading column.

VAN-*guard*. That part of the army which marches in the front. See GUARD.

VANCOURIER. See AVANT COURIER.

VANNE, *Fr.* A floodgate.

VANTAIL, *Fr.* Leaf of a folding door.

VANT-*bras*. Armor for the arm.

Droits de VARECH, *Fr.* The right to salvage. A term used in Normandy. *Varech* likewise signifies any vessel under water.

VARLOPE, *Fr.* A carpenter's large plane.

VARSA, *Ind.* The rainy season.

VASANT, *Ind.* The mild season or spring.

VASSALS. They who in the feudal system were obliged to attend their lord in war, as a tenure by which they held their lands, &c.

VEDETTE, (*Vedette*, Fr.) in war, a centinel on horseback, with his horse's head towards the place whence any danger is to be feared, and his carabine advanced, with the butt end against his right thigh. Vedettes are generally posted at the avenues, and on all the rising grounds, to guard the several passages when an enemy is encamped.

The Vedettes to the out-posts should always be double, for the following reasons: first, that whenever they make any discovery, one may be detached to the commanding officer of the out-posts; secondly, that they may keep each other watchful; and thirdly, that the vigilance of both may render it impossible for any thing to come near them without being seen. They should be at no greater distance from their detachments than 80 or 100 paces.

For particular instructions relative to the posting of Vedettes, see a treatise on the duties of an officer in the field, by baron Gross; *Am. Mil. Lib.*

VEKILCHARES. A word used among the Turks, which signifies the same as *Fourrier* in the French, and corresponds with quartermaster.

VELITES. Roman soldiers, who were commonly some of the Tiros, or young soldiers of mean condition, and lightly armed. They had their name, *a volando*, from flying, or *a velocitate*, from swiftness. They seem not to have acted in distinct bodies or companies, but to have hovered in loose order before the army. *Kennett's R. A.* page 190. Their arms consisted of a sword and javelin, and they had a shield or buckler which was sufficiently large to cover its man, being round and measuring three feet and a half in diameter.

They generally wore wolf's skins, or some other indifferent ornament upon their heads, to distinguish them during an action. Their javelins were a sort of dart, the wood of which measured three cubits in length, and was about the thickness of a finger. The point was about a hand's full breadth in length, and was so thin and brittle, that it snapped off the instant it reached or penetrated its object, so that the enemy could not return it. It was distinguished in this particular from other darts and javelins.

VELOCITY. The quickness of motion with which bodies are moved from one place to another.

Initial velocity of military projectiles, as ascertained by the experiments with the Balistic pendulum at Woolwich, in 1788, 1789, and 1790. These experiments were made with shot of equal diameters, powder of equal strength, and under a mean height of the barometer; and shew,

1. That there is very little difference in the velocities of shot fired from guns of the same length, but of unequal weights; the advantage being sometimes in favor of one and sometimes of the other.

2. That velocities arising from firing with different quantities of powder, are nearly in the proportion of the square roots of the quantities or weights of powder.

3. That the velocities decrease as the distances increase, arising from the resistance of the air, which opposes the progress of the shot, in a proportion somewhat higher than the squares of the velocities throughout; and only to a small variation.

4. That very little advantage is gained in point of range, by increasing the charge more than is necessary to attain the object, the velocities given by large charges being very soon reduced to those by moderate charges: those for instance given by half the shot's weight are reduced to an equality with those by one third, after passing through a space of only 200 feet.

5. That very little advantage is also gained by increasing the length of guns; the velocity given by long guns of 22 calibres length of bore, being reduced to an equality with those of the short guns of 15½ calibres with similar charges, after passing through the spaces as follows:

With ½	the shot's weight	285	feet
⅓	Do.	200	
¼	Do.	150	
1-6	Do.	115	

6. That the resistance of the air against balls of different diameters with equal velocities, is very nearly in the proportion of the square of their diameters; or as their surfaces.

7. That the velocity is not affected by compressing the charge more or less; or by heating the piece in different degrees.

8. That a very great increase of velocity arises from a decrease of windage; it appearing, that with the established windage of 1-20 between ⅓ and ¼ of the force is lost.

9. It also appeared, that by firing the charge in different parts; by varying the weight of the gun to lessen the recoil; or even by stopping the recoil entirely, no sensible change is produced in the velocity of the ball.

10. That though the velocity of the shot is increased only to a certain point peculiar to each gun, (a further increase of powder, producing a diminished velocity) yet the recoil of the gun is always increased by the increase of charge.

11. Velocity of a light 6 Pr.—length, 4 feet 8 inches; charge, ⅓ the weight of the shot; 1558 feet *per* second.—6 Prs. heavy; 6 feet 8 inches; charge ⅓=1673 feet.

Velocity of a light 3 Pr. length, 3 feet 4 inches, charge ¼—1371 feet *per* second.

Do. Heavy 3 Pr. length, 5 feet 9⅓ inches, charge ⅓ the shot—1584 feet.

Velocity of French Ordnance.

24 Pr. charge 8 lbs. the eprovette mortar giving 125 fathoms, the initial velocity is 1425 feet *per* second; with the eprovette at 90=1209 feet; with a charge of 12 lbs. and the eprovette at 125° the initial velocity will be 1530.

	Charge.	*Eprovette.*		*Velocity.*
16 pr.	5 lbs.	125		1415
———	8	do.		1510
12 pr.	4	do.	long guns	1520
8 pr.	2½	do.		1418
———	3	do.		1460
4 pr.	1	do.		1335
———	1½	do.		1508
12 pr.	4	do.	field guns	1442
8 pr.	2½	do.		1422
4 pr.	1½	do.		1446
8 inch how'r.	1	do.		390
——— ———	1 2 oz.	do.		516
6 inch how'r.	1	do.		5
——— ———	1 12	do.		

VENT, (*Lumière*, Fr.) in artillery, or, as it is vulgarly called, the touch-hole, is the opening through which the fire is conveyed to the powder that composes the charge.

As the placing the vents in mortars, howitzers, and guns in the best manner, is so very delicate a point, and about which both authors and practitioners differ, we will advance what the result of experiments has demonstrated. The most common method is to place the vent about a quarter of an inch from the bottom of the chamber or bore; though we have seen many half an inch, and some an inch from the bottom. It has always been imagined, that if the vent was to come out in the middle of the charge, the powder would be inflamed in less time than in any other case, and consequently produce the greatest range; because, if a tube be filled with powder, and lighted in the centre, the powder will be burnt in half the time it would be, were it lighted at one end. This gave a grounded supposition, that the greater the quantity of powder which burnt before the shot or shell was sensibly moved from its place, the greater force it would receive. To determine this, the king of Prussia, in 1765, ordered that a light three pounder should be cast, with three shifting vents, one at the centre of the charge, one at the bottom, and the other at an equal distance from the bottom and centre one; so that when one was used, the others were effectually stopped. The gun weighed 2 cwt. 1 qr. 20 lb.; its length was 3 feet 3 inches, and the bottom of the bore quite flat. It was loaded each time with one fourth of the shot's weight; and it was found, that when the lowest or bottom vent was used, the shot went farthest, and the ranges of the others diminished in proportion as they were distant from the bottom. The piece was elevated to 1 degree 30 minutes.

In 1766 the same monarch caused several experiments to be tried with three small mortars of equal size and dimensions, but of different forms in their chambers; each of which held seven ounces and a half of powder. From these experiments it appeared, that the concave chamber produced the greatest ranges, and that the bottom of the chamber is the best place for vents, having in that place the greatest effect.

The vents of English guns are all 2-10 of an inch diameter. See remark 9 of the article Velocity.

Vent-*field*, is the part of a gun or howitz between the breech mouldings and the astragal.

Vent-*astragal*, that part of a gun or howitzer which determines the vent-field.

Vent, *Fr.* That vacancy which is occasioned by the difference between the calibre of a piece of ordnance, and the diameter of its ball. See Windage.

Vent, *Fr.* Wind. The French use this word in various senses.

Vent *d'un boulet de canon*, Fr. The wind of a cannon ball.

Coup de vent, *Fr.* Heavy weather; a squall.

Vent *reglé*, Fr. A regular wind; such as the trade-wind.

Avoir du vent, *Fr.* In farriery; to be pursy.

Vents *alizes*, Fr. Trade winds.

VENTAIL. That part of a helmet which is made to lift up.

VENTOUSFS, *Fr.* Air-holes, ventilators.

VENTRE, *Fr.* Belly; womb. When a piece of ordnance is off its carriage, and lies on the ground, it is said, among the French, to be upon its belly—*etre sur le ventre.*

Se coucher ventre *à terre.* To lie down flat on your face. *Le capitaine ordonna à ses soldats de se coucher ventre à terre.* The captain ordered his men to lie on their bellies. This frequently occurs in action, when any part of the line or detached body is so posted as to be within reach of the enemy's cannon, and not sufficiently near to make use of its own musquetry.

Demander pardon ventre *à terre.* To ask pardon in the most abject position.

VERANDA, *Ind.* The covering of houses, being extended beyond the main wall of building, by means of a slanting roof, forming external rooms or passages; a colonade; balcony; gallery.

VERBAL *orders.* Instructions given by word of mouth, which, when communicated through an official channel, are to be considered as equally binding with written ones.

Verbal, *Fr.* Verbal; given by word of mouth.

Procès verbal, *Fr.* A verbal deposition.

VERD, *Fr.* Green. This word is sometimes used in a figurative sense by the French, viz.

Homme verd *or* vert, *Fr.* A resolute man.

Tête verte, *Fr.* A giddy thoughtless fellow.

Verd *pour les chevaux*, Fr. Green forage or grass. In the *ancien regime* of France, the cavalry and dragoon horses, when quartered in a flat country, were allowed to be thirty days at grass; the particular period was left to the discretion of the commanding officers. The term was sometimes extended to forty days, without any deduction being made for the ten days; by means of which an emolument accrued to the captains of troops, not only from the horses which were actually sent to grass, but likewise for those that were returned as such.

VERDIGREASE, (*Verd-de-Gris*, Fr.) A kind of rust of copper, which is of great use among painters. It is also taken medicinally.

VERGE, *Fr.* A yard; a measure; a switch, &c.

Verge *Rhinlandique*, Fr. The Rhinland rod; a measure which is equal to two French toises, or to 12 French feet. It is often used by Dutch engineers, in the measuring of works in a fortification.

Verge *d'or*, Fr. The same as *arbalete*, *arbalestrille*, or Jacob's staff; in astronomy, a beam of light.

Verges, *Fr.* Rods.

Passer par les verges, *Fr.* A punishment which was formerly practised among the French. The same as running the gauntlet. See Punitions corporelles.

Verges, *Fr.* Twigs or branches measuring from ten to twelve feet in length, which are used in making fascines.

VERNIS, *Fr.* Varnish.

VEROLE, *Fr.* Great pox, which see. Notwithstanding the prevalence of this disorder in France, and throughout Europe, it is reckoned so dreadful a visitation, that the French have a familiar proverb which says, *Si tu ne crains pas Dieu, au moins crains la verole;* if thou art not afraid of God, dread, at least, the pox. Vaccine should be introduced in all armies.

VERRE *pour prendre hauteur*, Fr. A thick colored glass, through which an observation is taken of the sun.

Verre *pilé*, Fr. Broken pieces of glass, which are sometimes used in artificial fire-works.

VERRIN, *Fr.* A machine which is used to raise large weights; such as cannon, &c.

VERROU, *Fr.* A bolt.

VERSER, *Fr.* To spill, to shed.

Verser *son sang pour la patrie*, Fr. To shed one's blood for the country.

VERTICAL, (*vertical*, Fr.) Perpendicular.

Vertical *point*, (*point vertical*, Fr.) A term used in astronomy, to express an imaginary point in the heavens, which is supposed to fall perpendicularly upon our heads.

VESTIBULE, *Fr.* Porch; entry; hall.

Vestibule, (*vestibule*, Fr.) In fortification, is that space or covered ground which is in front of guard houses, and is generally supported by pillars. In a more general sense, any large open space before the door or entrance of a house. Daviler derives the word from *vestes* and *ambulo*, by reason people there begin to let their trains fall. It is properly the outer hall in which persons were accustomed to take off their outer garments or great coats.

VETERAN, (*veteran*, Fr.) This word comes from the Latin *veteranus*, a soldier in the Roman militia, who was grown old in the service, or who had made a certain number of campaigns, and on that account was entitled to certain benefits and privileges.

Twenty years service were sufficient to entitle a man to the benefit of a veteran. These privileges consisted in being absolved from the military oath, in being excused all the duties and functions of a soldier, and in being allowed a certain salary or appointment.

A French soldier is entitled to the honorable name of veteran, after he has served twenty-four years, without any break in his service.

VETERANCE, *Fr.* The state, condition of an old soldier.

Lettre de veterance, *Fr.* The document or letter which enables an old soldier to claim the rights and privileges of a veteran.

VETERINAIRE, *Fr.* See Veterinary.

Ecole veterinaire, *Fr.* Veterinary school.

VETERINARIAN, (*Veterinarius*, Lat.) One skilled in the diseases of cattle; a farrier, or horse doctor.

VETERINARY. Appertaining to the science of taking care of cattle.

VETERINARY *surgeon*. The surgeon appointed to take care of the horses in a cavalry or dragoon regiment is so called. He is subordinate and accountable to the veterinary college.

VETILLES, *Fr.* This word literally signifies trifles. In artificial fire-works they are small serpentine compositions, confined within a single roll of paper. They have generally three lines in diameter.

VEXATIOUS *and groundless*. Charges of accusation, and appeals for redress of wrongs are so called, when the persons who make them cannot substantiate their subject matter. Officers, non-commissioned officers, and soldiers are liable to be punished at the discretion of a general court martial for vexatious conduct. Charges are sometimes peremptorily dismissed, without permitting them to stand the investigation of a court martial, when they appear vexatious and frivolous.

UGHUN, or *Aughun*, *Ind.* A month which partly corresponds with November; it follows Katik.

VIANDE, *Fr.* Meat; animal food: In the old regime every French soldier was allowed half a pound of meat per day.

M. de Louvois, who was minister of war under the old government of France, formed a plan, recommending, that a quantity of dried meat, reduced to powder, should be distributed to troops on service. He took the idea from a custom which is prevalent in the East. He did not, however, live to fulfil his intentions, although he had already constructed copper ovens that were large enough to contain eight bullocks. Very excellent broth can be made of this powder; one ounce of which boiled in water, will supply a sufficient quantity for four men; and one pound of fresh meat gives one ounce of powder; so that, according to the inventor's assertion, there is a saving of one pound. The portable soup-balls which are sold for sea use, are of the same nature.

VIBRATION. See PENDULUM.

VICE-ADMIRAL, (*vice-amiral*, Fr.) A naval officer of the second rank; who takes rank with generals of horse. Louis XIV. who endeavored to establish a French navy in 1669, created two vice-admirals of the fleet, whom he called vice-admiral of the east, and vice-admiral of the west.

VICTOR. A conqueror; generally applied to the chief officer of a successful army.

VICTORY, (*victoire*, Fr.) The overthrow or defeat of an enemy in war, combat, duel, or the like.

VICTUAILLES, *Fr.* The provisions which are embarked on board ships of war are so called by the French.

VICTUAILLEUR, *Fr.* Victualler.

VICTUALS. Food or sustenance allowed to the troops, under certain regulations, whether on shore or embarked in transports.

VICTUALLERS. See SUTLERS.

VIEUX *corps*, Fr. A term used among the French before the revolution, to distinguish certain old regiments. There were six of this description, viz. Picardy, Piedmont, Navarre, Champagne, Normandy, and the marine corps. The three first were formed in 1562, and that of Champagne in 1575. They were then called *Les vieilles bandes*; the ancient or old bands; and before that period, each was known by the name of its colonel.

Les petits VIEUX *corps*, Fr. La Tour du Pin, Bourbonnois, Auvergne, Belsunce, Meilly, and the regiment du Roi, or the king's own, were so called during the French monarchy. All the other regiments ranked according to the several dates of their creation, and the officers took precedence in consequence of it.

VIEW *of a place*. The view of a place is said to be taken when the general, accompanied by an engineer, reconnoitres it, that is, rides round the place, observing its situation, with the nature of the country about it; as hills, valleys, rivers, marshes, woods, hedges, &c.; thence to judge of the most convenient place for opening the trenches and carrying on the approaches; to find out proper places for encamping the army, and for the park of artillery.

To VIEW. See *To* RECONNOITRE. See *Am. Mil. Lib.*

VIF, *Fr.* This word is frequently used among the French to signify the core, or inside of any thing—viz:

VIF *d'un arbre*, Fr. The inside of a tree.

VIF *d'une pierre*, Fr. The inside of a stone.

VIF *de l'eau*, Fr. High water.

VIGIER, *Fr.* To keep watch.

VIGIER *une flotte de vaisseaux marchands*, Fr. To convoy a fleet of merchantmen.

VIGIES, *Fr.* A term given to certain rocks under water near the Azores. Vigie likewise signifies a watch, or centinel on board a ship; but it is chiefly used among the Spaniards in South America.

VIGILANT, (*vigilant*, Fr.) Watchful, attentive.

VIGOROUS, (*vigoreaux*, Fr.) Strong, brisk, active, resolute.

VIGOTE, *Fr.* A model by which the calibres of pieces of ordnance are ascertained, in order to pick out appropriate bullets. This model consists of a plate of sheet iron in which there are holes of different sizes, according to the several calibres of cannon.

VILBREQUIN, *Fr.* A wimble.

VILLE, *Fr.* See TOWN.

VIN, *Fr.* Wine.

VINCIBLE. Conquerable; in a state to be defeated.

VINDAS, *Fr.* See WINDLASS.

VINEGAR, (*Vinaigre*, Fr.) Vinegar is frequently used in the artillery to cool pieces of ordnance. Two pints of vinegar to four of water is the usual mixture for this purpose.

VINTAINE, *Fr.* A small rope which masons use to prevent stones from hitting against a wall when they draw them up.

VIOLENCE. Force, attack, assault.

VIRAGO. A female warrior; a scold.

VIRER, *Fr.* To change, to turn round. This word is used figuratively by the French, viz. *Tourner et virer*; to beat about the bush; as *Tourner et virer quelqu'un*, in an active sense, to pump another.

VIREVAU, *Fr.* A draw-beam, a capstan.

VIRE-VOLTE, *Fr.* A quick turning about. It is a term of the manege.

VIROLE, *Fr.* A ferrule; verrel.

VIS, Fr. Screw, vice, spindle-tree.

VISIER,
VIZIER, } (*Visir*, Fr.) An officer or dignity in the Ottoman
VIZIR,
Empire; whereof there are two kinds, the first called by the Turks Vizir Azem, or grand Vizir, first created in 1370 by Amurath the First, in order to ease himself of the chief and weightier affairs of the government. The grand Vizir possesses great powers, especially with regard to military affairs. The orders he issues are so thoroughly discretional, that when he quits Constantinople to join the army, he does not even communicate his intentions to the sultan. This system entirely differs from that which is followed by European generals. When the latter take the field, they proceed upon plans that have been previously digested; and although they may occasionally change their dispositions, yet they never deviate from the essential and governing principles.

The grand Vizir, on the contrary, not only makes the arrangements according to his own judgment, but he even changes an operation that has been previously ordered by the sultan, if, on his arrival at the spot, he should think it expedient to employ the troops in a different way. This absolute power is not, however, without its risk; for if the grand Vizir should fail in his enterprize, it is more than probable that the sultan will cause him to be beheaded: a punishment which has long been familiar to the Turks, from the arbitrary manner in which it is practised, and the frequency of its occurrence.

When the Turks engage an enemy, the grand Vizir generally remains with the reserve, and seldom mingles with the main body, which is soon converted into a mob of desperate combatants. The war which had been carried into Egypt, bid fair to change the whole system of Turkish tactics.

VIZIER *Nawab of Oude*, the prime minister of the Mogul empire; he became sovereign of Oude and Lucknow; he was deposed by the British in 1795, and the sovereignty assumed by the British government.

VISIERE, *Fr.* The *sight*, which is fixed on the barrel of a musquet or firelock.

To VISIT, (*Visiter*, Fr.) To go to any place, as quarters, barracks, hospital, &c. for the purpose of noticing whether the orders or regulations which have been issued respecting it, are observed.

VISITE *des Postes*, Fr. The act of visiting posts, &c.

Faire la VISITE, Fr. To visit, to inspect.

VISITEUR, *Fr.* The person who visits or goes the rounds.

VISITING *Officer*. He whose duty it is to visit the guards, barracks, messes, hospital, &c. See ORDERLY OFFICER.

VISOR, } That part of the helmet
VIZARD, } which covered the face.

VITAL AIR, or azote and oxygene, now properly called *nitrogene gas*; the cause of the rapid ignition of gunpowder, is the expansion of the air or oxygene which it contains.

VITCHOURA, *Fr.* A furred coat.

VITESSE, *Fr.* Dispatch; promptitude of action.

VITONIERES, *Fr.* Limber holes.

VIVANDIERS, *Fr.* Victuallers, sutlers, &c.

VIVAT, *Fr.* A familiar exclamation, which is used not only by the French, but by the Dutch, Germans—it comes from the Latin, and signifies literally, May he live!

VIVE *le Roi!* Fr. Long live the king!

VIVE *la Republique!* Fr. Long live the republic!

Qui vive? Fr. A military phrase which is used in challenging—Who comes there?

VIVRE, *vivres*, Fr. Food, provisions, subsistence. In the *Dictionnaire Militaire*, vol. iii. page 525, is an interesting account of the manner in which troops were subsisted during the first years of the French monarchy.

VIVRES *et leur distribution chez les Turcs*, Fr. The kind of provisions, &c. and the manner in which they are distributed among the Turks. The food or provisions for the Turkish soldiery form an immediate part of the military baggage.

The government supplies flour, bread, biscuit, rice, bulgur or peeled barley, butter, mutton, and beef, and grain for the horses, which is almost wholly barley.

The bread is generally moist, not having been leavened, and is almost always ready to mould. On which account the Armenians, who are the bakers, bake every day in ovens that have been constructed under ground for the use of the army. When there is not sufficient time to bake bread, biscuit is distributed among the men.

The ration of bread for each soldier consists of one hundred drams per day, or fifty drams of biscuit, sixty of beef or mutton, twenty-five of butter to bake the peeled barley in, and fifty of rice. The rice is given on Friday every week, on which day they likewise receive a ration of fifty drams of bulgur mixed with butter, as an extraordinary allowance, making a kind of water-gruel.

These provisions are distributed in two different quarters. The meat is given out at the government butchery, where a certain number of Armenians, Greeks, and Jews regularly attend. Each company sends a head cook, who goes with a cart and receives the allowance from a sort of quarter-master serjeant, who is in waiting with a regular return of what is wanted for each oda.

This person is stiled among the Turks *Meidan Chiaous*. He stands upon a spot of ground which is more elevated than the rest, and receives the allowance due to his district.

The distribution of bread, &c. is made within the precincts of the Tefterdar-Bascy, where the Vekil-karet attends as director or superintendant of stores and provisions, and by whose order they are delivered.

When the allowance is brought to the oda or company, the Vekil-karet, a sort of quarter-master, sees it regularly measured out, and if any portions be deficient, he takes note of the same, in order to have them replaced for the benefit of the company. The remainder is then given to the head cook, who divides it into two meals, one for eleven o'clock in the morning, and the other for seven in the evening.

These two meals consist of boiled or stewed meat, mixed with rice, and seasoned with pepper and salt; water-gruel being regularly made for each man on Friday.

There are six kitchen boys or quateri attached to each oda, by which they are paid a certain subsistence. On solemn occasions, and on festival days, the quateri are dressed in long gowns made of skins, with borders to them; they likewise wear a large knife with an encrusted silver handle, which hangs at their side. They serve up the victuals in two copper vessels, that are laid upon a table covered with a skin, round which seven or eight persons may be seated.

VIVRIERS, *Fr.* Clerks and other persons employed by the commissary-general, or contractor for stores and provisions.

Mons. Dupré D'Aulnay, in a work entitled *Traites des Subsistances Militaires,* has suggested the establishment of a regular corps of *Vivriers* or persons whose sole duty should be to attend to the subsistence of an army, in the field as well as in garrison. His reasoning upon this subject is very acute, full of good sense, and seems calculated to produce that system of economy and wholesome distribution, that, to this day, are so manifestly wanted in all military arrangements.

VIZ, *Ind.* A small coin; it is also a weight equal to about three pounds; but differs much in value according to place.

VIZARUT, *Ind.* The office of Vizier.

VIZIER, *Ind.* Prime minister.

ULANS, *Fr.* This word is sometimes written Hulans. A certain description of militia among the modern Tartars was so called. They formerly did duty in Poland and Lithuania, and served as light cavalry.

It is not exactly known at what epoch the Tartars first came into Poland and Lithuania. Dlugossus, in his history of Poland, book XI. page 243, relates, that there were troops or companies of Tartars attached to the army which was under the command of Alexander Witholde, grand duke of Lithuania. Heidenstein, in his account of Poland, *Rer Polonic,* page 152, makes mention of a corps of Tartars belonging to the army which Stephen Bathori, king of Poland, carried into the field when he fought the Russians. This corps, according to the same author, was headed by one *Ulan,* who said he was descended from the princes of Tartary.

Although the origin of the word Ulan, as far as it regards the modern militia so called, does not appear to be indisputably ascertained, it is nevertheless well proved, that besides the Tartar chief under Stephen Bathori, the person, who in the reign of Augustus the II. formed the first pulk, or regiment of that description, was not only called Ulan himself, but likewise gave the name to the whole body under his command. This chief is mentioned in the records of the military institution of Poland in 1717. He was then colonel or commandant of the first pulk, or king's regiment, and there were three captains under him of the same name, viz:—Joseph Ulan, David Ulan, and Cimbey Ulan. In 1744, one of these was captain of a company of Ulans in Bohemia, and was afterwards colonel of a corps of the same description in Poland. He is likewise said to have been descended from the Tartar princes. It is, however, left undecided, whether *Ulan* be the name of a particular family, or a term given to distinguish some post of honor; or again, whether it barely signify a certain class of turbulent haughty soldiers, such as the Streletz of Russia, or the Janizaries of Constantinople.

If there be any thing which can make us question the authenticity or probability of this account, it is the passage we find in the book already quoted—viz: Dlugossus, where he says liv. XIII. page 403, that in 1467 an ambassador from Tartary had arrived at Petrigkow to announce to king Casimir, that, after the death of Ecziger his son Nordowlad, had ascended the throne of Tartary with the unanimous consent and concurrence of all the princes and *Ulans.* Quitting the etymology of the word, and leaving the original name to the determination of wise and scientific men, we shall confine our present researches to the modern establishment of the Ulans; which, by the best accounts, we find to have happened in 1717.

It is acknowleged by all writers, that the Ulans are a militia, and not a particular nation or class of people; their origin, in this particular, resembles that of the Cossacks. When Augustus II. in 1717 altered the military establishment of Poland, he formed two regiments of Ulans; one consisting of six hundred men, which had already existed, and was called the king's pulk, and the other of four hundred men, which was given to the great general of the republic.

Augustus III. on his accession to the throne, took both these regiments into his own immediate pay, and afterwards augmented the establishment by raising several other pulks or corps of this description. The Ulans are mounted on Polish or Tartar horses, and do the same duty that is allotted to hussars; with this essential difference, that they are better armed and accoutred, and that their horses excel those of the hussars in strength and swiftness, although they are mostly of the same size. The Ulans have frequently distinguished themselves on service, particularly in Bohemia.

Their principal weapon is a lance five feet long, at the end of which hangs a silk streamer, that serves to frighten the horse of the Ulan's opponent, by its fluttering and noise. The lance is suspended on his right side, by means of a belt that is worn across the Ulan's shoulders, or by a small leather thong which goes round his right arm, the end of the lance resting in a sort of stay that is attached to the stirrup. Before the Ulan takes his aim, he plants his lance upon his foot and throws it with so much dexterity, that he seldom misses his object.

The dress of the Ulan consists of a short jacket, trowsers or pantaloons made like those of the Turks, which reach to the ancle bone, and button above the hips. He wears a belt across his waist. The upper garment is a sort of Turkish robe with small facings, which reaches to the calf of the leg; his head is covered with a Polish cap. The color of the streamer which is fixed to the end of the lance, as well as that of the facings, varies according to the different pulks or regiments which it is meant to distinguish. The Ulan is likewise armed with a sabre, and a brace of pistols which hang from his waistbelt.

As the Ulans consider themselves in the light of free and independent gentlemen, every individual amongst them has one servant, if not two, called *pocztowy* or *pacholeks*, whose sole business is to attend to their baggage and horses. When the Ulans take the field, these servants or batmen form a second or detached line, and fight separately from their masters. They are armed with a carbine, which weapon is looked upon with contempt by their masters, and they clothe themselves in the best manner they can.

The Ulans generally engage the enemy in small platoons or squads, after the manner of the hussars; occasionally breaking into the most desultory order. They rally with the greatest skill, and frequently affect to run away for the purpose of inducing their opponents to pursue them loosely: a circumstance which seldom fails to be fatal to the latter, as the instant the pursuers have quitted their main body, the Ulan wheels to the right about, gets the start of him through the activity of his horse, and obtains that advantage, hand to hand, which the other possessed whilst he acted in close order.

The instant the Ulans charge an enemy, their servants or batmen form and stand in squadrons or platoons, in order to afford them, under circumstances of repulse, a temporary shelter behind, and to check the enemy. The batmen belonging to the Ulans are extremely clever in laying ambushes.

The pay of the Ulans in time of peace is very moderate. Poland, before its infamous dismemberment and partition by Russia, Prussia, and Austria, kept a regular establishment of four squadrons and ten companies on foot. These troops were annually supplied with a thousand rations of bread and forage, which quantity was paid them at the rate of 272 florins, Polish money, per ration. The grand duchy of Lithuania subsisted, in the same manner, fifteen other companies of Ulans. The other pulks were paid by the king. The annual pay of the captains was five rations, and that of the subalterns two; that is 1360 florins to the former, and 544 florins to the latter.

In 1743 marshal Saxe, with the approbation and concurrence of the French court, raised a regiment of Ulans, which was attached to the military establishment of that country. This corps consisted of one thousand men, divided into six squadrons, each squadron composed of one hundred and sixty men, eighty of whom were Ulans, and eighty dragoons. So that the regiment consisted of five hundred Ulans, properly so called, armed and accoutred like those in Poland, and the other five hundred were dragoons, without being considered as the servants or batmen of the Ulans; in which instance they differed from the pacholeks of the Polish Ulans. These dragoons were paid by the king; whereas in Poland each Ulan paid his own servant or batman, who looked to him only for clothing, arms, and subsistence. On the death of marshal Saxe, the Ulans in France were reduced; and the dragoons only kept upon the establishment. They were considered as a regiment; being at first given to count de Frise, who was a major-general in the service, and became their colonel, and they remained on that footing until the revolution.

The uniform of the French Ulans consisted of a green coat or cloak, with green breeches, Hungarian half-boots, pinchbeck helmet with a turban twisted round it of Russian leather; the tail or mane of the helmet consisted of horse-hair, which was colored according to the facings of the brigade; their arms were a lance nine feet long, with a floating streamer at the top, a sabre, and a pistol in the waistbelt.

The dragoons were clothed like other regular troops. Their coat was green, with cream-colored facings and scarlet linings; plain brass buttons, and aiguillette or tagged point, made of red worsted; a fawn colored waistcoat, edged round with scarlet; leather breeches; half-boots that were laced up to the calf of the leg; pinchbeck helmet, with a seal skin turban round it, and two rosettes made of pinchbeck; the top was adorned with horse-hair, which hung behind. Their arms consisted of a fusil with a bayonet, which was always fixed; two pistols and a sabre; the horse was covered with a wolf's skin. The Ulans rode horses which were somewhat lower than those of the dragoons, and were more active.

At the commencement of the French revolution, particularly in 1792 and 1793, the Ulans belonging to the Imperial army that endeavored to penetrate into France, were the terror of the inhabitants all along the frontiers. The excesses which they committed, and the desolation they occasioned, rendered their very name a signal of alarm. They seldom gave quarter, and they never received it.

ULTIMATUM. A term used in negociations to signify the last condition or conditions upon which propositions, that have been mutually exchanged, can be finally ratified.

ULTRAMARINE. From beyond the sea—foreign. It is also the name of a very delicate sky blue powder made from *lapis lazuli*, and used in the *drawing* of plans, &c.

ULTRAMONTANE. Derived from the Latin *Ultra*, beyond, and *Mons*, mountain. This term is principally used in relation to Italy and France, which are separated by the Alps. According to Bayley, *Ultramontanus* is a name given by the Italians to all people who live beyond the Alps.

UMBO. The pointed boss or prominent part in the centre of a shield or buckler.

UMBRIERE. The visor of a helmet.

UMPIRE. An arbitrator, or a power which interferes for the adjustment of a dispute or contest.

UNARMED. The state of being without armor or weapons.

To UNCASE. In a military sense to display, to exhibit—As to uncase the colors. It is opposed to the word, *To Case*, which signifies to put up—to enclose.

To UNCOVER. When troops deploy, the different leading companies or divisions, &c. successively uncover those in their rear, by marching out from the right or left of the column.

UNCONDITIONAL. At discretion; not limited by any terms or stipulations.

UNCONQUERED. Not subdued or defeated; in opposition to conquered or defeated.

UNDAUNTED. Not appalled by fear; valiant.

UNDECAGON. A regular polygon of eleven sides or angles.

UNDER. This preposition is variously used in military matters, viz.

UNDER *Command*, (*Sous Ordre*, Fr.) In subjection to; liable to be ordered to do any particular duty.

UNDER *Cover*, (*à couvert*, *à l'abri*, Fr.) Shielded, protected, &c. See COVER.

UNDER *Arms*, (*Sous Armes*, Fr.) A battalion, troop, or company is said to be under arms when the men are drawn up regularly armed and accoutred, &c.

To UNDERMINE. To dig cavities under any thing, so that it may fall, or be blown up; to excavacate.

To UNDERMINE. In a figurative sense, to injure by clandestine means. The discipline of the army may be *undermined* by secret practices and cabals; the want of a fit capacity at the head of the war office, will operate like the want of brains in the human head; and the most enterprizing officer may be undermined by the insinuations of a cowardly parasite and reporter.

UNDERMINER. A sapper, one who digs a mine.

UNDER-*Officer*. An inferior officer; one in a subordinate situation.

UNDISCIPLINED. Not yet trained to regularity or order; not perfect in exercise or manœuvres.

To UNFIX. In a military sense, to take off, as *Unfix Bayonet*, on which the soldier disengages the bayonet from his piece, and returns it to the scabbard. The word *return*, as we have already observed, is sometimes used instead of unfix.—But it is improperly used, although it more immediately corresponds with the French term *Remettre*.

UNFORTIFIED. Not strengthened or secured by any walls, bulwarks, or fortifications.

UNFURLED. A standard or colors, when expanded and displayed, is said to be unfurled.

UNGENTLEMANLIKE, UNOFFICERLIKE, (*Malhonnête*, *Grossier*, Fr.) Not like a gentleman or officer. Conduct unbecoming the character of either is so called. This clause which will be always found to depend on the state of *morals* and *manners*, affords a vast latitude to a military court, which, after all, is not more free from prejudice or influence than any other tribunal, though they are both jurors and judges. Officers convicted thereof are to be discharged from the service. See ARTICLES OF WAR.

UNHARNESSED. Disarmed; divested of armor or weapons of offence.

UNHORSED. Thrown from the saddle; dismounted.

UNHOSTILE. Not inimical, or belonging to an enemy.

UNIFORM, (*Uniforme*, Fr.) This word, though in a military sense it signifies the same as regimental, which is used both as a substantive and an adjective, may nevertheless be considered in a more extensive light. Uniform is applied to the different sorts of clothing by which whole armies are distinguished from one another; whereas regimental means properly the dress of the component parts of some national force. Thus the national uniform of the American army is blue, as is that of the modern French, white of the Austrian, green of the Russian, and red of the British, &c. But in each of these armies there are particular corps which are clothed in other colors, and whose clothing is made in a shape peculiar to themselves. Though generally speaking each has an uniform within itself, yet this uniform, strictly considered, is a regimental.

With respect to the origin of *military uniforms*, we should make useless enquiries were we to direct our attention to those periods in which the Romans fought covered with metal armor, or with leather which was so dressed and fitted to the body, that the human shape appeared in all its natural formation; nor to those in which the French, almost naked, or at least very lightly clad in thin leather, conquered the ancient Gauls. Better information will be acquired by recurring to the Crusades which were made into Palestine and Constantinople by the Europeans. We shall there find, that the western nations, France, England, &c. first adopted the use of rich garments, which they wore over their armors, and adorned their dresses with furs from Tartary and Russia.

We may then fix the origin of colored dresses to distinguish military corps, &c. in the eleventh century. The Saracens generally wore tunics or close garments under their armor. These garments were made of plain or striped stuffs, and were adopted by the Crusaders under the denomination of coats of arms, *Cottes d'armes.* We refer our readers for further particulars to the author of a French work, entitled, *Traité des marques nationales*, and to page 533, tom. iii. *du Dictionnaire Militaire;* observing, that the uniforms of the French army were not completely settled under the reign of Louis the XIVth, and that the whole has undergone considerable alterations since the present revolution.

UNIFORME *des charretiers des vivres*, Fr. Uniform of the old French Waggon Corps. It consisted of white sackcloth edged round with blue worsted, with brass buttons, two in front and three upon each sleeve. They wore a dragoon watering cap, with W upon the front fold, and a tuft at the end. The W and the tuft were made of white worsted.

UNIFORMS.—*Principal color of the military uniforms of the different powers.*

NATIONS.	CAVALRY.	INFANTRY.	ARTILLERY	REMARKS.
America	Blue	Blue	Blue	Black cockades.
Ancient Poland	Blue	Blue	Blue	
Anspach	Blue	Blue	Blue	
Austria	White	White	Grey	
Baden	—	Blue	—	
Bavaria	—	White	Grey	
Berne	Red	Blue	Blue	Black and red cockades.
Brunswick	—	Blue	—	
Denmark	—	Red	—	Black cockades.
England	Blue	Red	Blue	
France	Blue	Blue	Blue	Blue, red, and white.
Hanover	Blue	Red	Mixt Blue	Green cockades.
Hesse	White	Blue	Blue	
Holland	White	Blue	Blue	
Mayence	—	White	Mixt Blue	
Mecklenburg	Blue	Blue	Blue	
Nassau	—	Blue	—	
Palatine	Crimson	Clear Blue	—	
Prussia	White	Blue	Blue	Orag. light blue.
Russia	Blue	Green	Green	Black cockades.
Sardinia	Blue	Blue	Blue	
Saxe Cobourg	—	Blue	—	
Saxe Gotha	Blue	Blue	Blue	
Saxe Heidelburg	—	Blue	—	
Saxe Memingen	—	Blue	—	
Saxe Weimer	Blue	Blue	Green	
Saxony	White	White	Green	Dragoons red; White cockades.
Spain	Grey	White	Blue	Red and yellow.
Sweden	—	Blue	—	Yellow cockades.
Wurtemburg	—	Blue	Blue	

UNIFORMITY. Conformity to one pattern; resemblance of one thing to another.

UNION. The national colors are called the union. When there is a blue field with white stripes, quartered in the angle of the American colors, that is of the colors composed of red and white stripes; that blue field is called the Union; and a small colors of blue with white stars is called an *Union* JACK.

UNIVERSITY. In a general acceptation of the word, any nursery where youth is instructed in languages, arts, and sciences. It likewise means the whole in general, generality.

To UNSPRING. A word of command formerly used in the exercise of cavalry, now obsolete.

Unspring your carbine. Quit the reins of your bridle, and take hold of the swivel with the left hand, placing the thumb on the spring, and opening it; at the same time take it out of the ring.

UNTENABLE. Not to be held in possession; incapable of being defended.

UNTRAINED. Not disciplined to exercise or manœuvre.

UNVANQUISHED. Not conquered or defeated.

UNWALLED. Being without walls of defence.

UNWARLIKE. Not fit for or used to war.

UNWEAPONED. Not provided with arms of offence.

VOGUE, *Fr.* The course or way which a galley or ship makes when it is rowed forward.

VOGUER, *Fr.* To make way upon water either by means of sailing or by oars. It also signifies generally to row.

VOIE, *Fr.* Way, means, course of communication.

VOILE, *Fr.* A sail. This word is frequently used by the French to signify the ship itself; as we say, a sail in sight.

Voile *quarrée ou à trait quarrée*, Fr. A square sail, such as the main-sail.

Voile *Latine, Voile à tiers-point, ou a Oreille de Liévre*, Fr. A triangular-shaped sail, such as is used in the Mediterranean.

Jet de Voiles, *Fr.* The complete complement of sails for a ship.

Faire Voile, *Fr.* To go to sea.

VOITURES, *Fr.* Carriages, waggons, &c.

VOIL, *Fr.* Theft. The military regulations on this head during the existence of the French monarchy, were extremely rigid and severe.

Whosoever was convicted of having stolen any of the public stores, was sentenced to be strangled; and if any soldier was discovered to have robbed his comrade, either of his necessaries, bread, or subsistence money, he was condemned to death, or to the gallies for life. So nice, indeed, were the French with respect to the honesty of the soldiery in general, that the slightest deviation from it rendered an individual incapable of ever serving again. When the French troops marched through the United States during the revolution so exact was their discipline, that in marching through an orchard loaded with fruit not an apple was touched.

VOLEE, *Fr.* The vacant cylinder of a cannon, which may be considered to reach from the trunnions to the mouth.

Volee *et culasse d' une piece*, Fr. This term signifies the same as *tête et queue piece*. The mouth or head and breech of a piece of ordnance.

Volee, *Fr.* Also signifies a cannon shot, as *Tirer une volee*, to fire a cannon shot.

Volee, *Fr.* See Sonnette.

VOLET, *Fr.* A shutter. It likewise means a small sea compass.

VOLLEY. The discharging of a great number of firearms at the same time.

VOLONTAIRES, *Fr.* See Volunteers.

VOLONTE, *Fr.* Will, &c. It likewise signifies readiness to do any thing. *Officier, soldat de bonne volonte.* An officer, a soldier that is ready to do any sort of duty.

Dernieres Volontes, *Fr.* The last will and testament of a man.

VOLT, (*Volte*, Fr.) In horsemanship, a bounding turn. It is derived from the Italian word *Volta;* and according to the Farrier's Dictionary, is a round or a circular tread; a gate of two treads made by a horse going sideways round a centre; so that these two treads make parallel tracks; the one which is made by the fore feet larger, and the other by the hinder feet smaller; the shoulders bearing outwards, and the croupe approaching towards the centre.

Mettre un cheval sur les voltes, *Fr.* To make a horse turn round, or perform the volts. They likewise say in the manege, *demi-volte*, half-turn or volt.

Volte, *Fr.* In fencing, a sudden movement or leap, which is made to avoid the thrust of an antagonist.

Volte-*face*, Fr. Right about.

Faire volte-*face*, Fr. To come to the right about. It is chiefly applicable to a cavalry movement; and sometimes generally used to express any species of facing about, viz. *Les ennemis fuirent jusqu'à un certain endroit, ou ils firent volte face;* the enemy fled to a certain spot, where they faced about.

Volte, is also used as a sea phrase among the French to express the track which a vessel sails; likewise the different movements and tacks that a ship makes in preparing for action.

VOLTER, *Fr.* In fencing, to volt; to change ground in order to avoid the thrust of an antagonist.

VOLTIGER, *Fr.* To float; to stream out; to hover about; *La cavalrie voltige autour du camp;* the cavalry hovers about the camp. It also means, in the manege, to ride a wooden horse for the purpose of acquiring a good seat.

VOLTIGUER, *Fr.* A vaulter; a jumper; a hoverer; the French have trained their light troops to run, vault, and bear fatigues; these troops act as riflemen on foot or horseback; swim rivers with their arms; and vault behind horsemen to be transported rapidly to some point where it is necessary to make an impression. These corps were formed from an observance of the hardiness and intrepidity of American riflemen, by general *Berthier*, who served in America with Rochambeau.

VOLUNTEER. In a general acceptation of the word, any one who enters into the service of his own accord. The signification of it is more or less extensive, according to the conditions on which a man voluntarily engages to bear arms.

Volunteers are also bodies of men

who assemble in time of war to defend their respective districts, and this generally without pay.

To VOLUNTEER. To engage in any affair of one's own accord. Officers and soldiers often volunteer their services on the most desperate occasions; sometimes specifically, and sometimes generally.—Hence to volunteer for any particular enterprize, or to volunteer for general service. In some instances soldiers volunteer for a limited period, and within certain boundaries.

Volunteers approach nearer to the regular establishment than the militia.

VOUGE, *Fr.* A sort of hedging bill. It likewise signifies an axe, which the ancient bowmen of France had fixed to their halberts. It is also called a hunter's staff.

VOUSSOIR or VOUSSURE, *Fr.* The bending of a vault.

VOUTE, *Fr.* A vault; an arch.

VOYAGE *sur Mer*, Fr. A sea voyage. The French call a voyage to the East Indies, *Un voyage de long cours.*

UP. An adverb frequently used in military phraseology, viz. *Up in arms;* in a state of insurrection.

To draw UP. To put in regular array, as to draw *up* a regiment.

VRILLE, *Fr.* A wimble.

VRILLER, *Fr.* Among fireworkers, to rise in a spiral manner, as sky-rockets do.

USAAR, *Ind.* The name of a month, which partly corresponds with June; it follows Jeyt.

To USE. To employ to any particular purpose; to bring into action; as he used his choicest troops on that decisive day.

USTENSILES, *Fr.* The necessary articles which a soldier has a right to be supplied with.

USTENSILES *de magazins*, Fr. Under this word are comprehended all the various tools, implements, &c. which are required in military magazines and storehouses.

USTENSILES *d'un vaisseau*, Fr. Every thing which is necessary in the navigation of a ship.

USTENSILES *de canon*, Fr. Every thing which is required to load and unload a piece of ordnance, viz. the rammer, spunge, priming horn, wedges, &c.

UTENSILS. In a military sense, are necessaries due to every soldier.

In the British service it is directed to be provided for the use of regimental hospitals, that each hospital ought to be furnished with a slipper bath, or bathing tub, two water buckets, one dozen of Osnaburgh towels, one dozen of flannel cloths, half a dozen of large sponges, combs, razors, and soap; two large kettles capable of making soup for 30 men, two large tea kettles, two large tea pots, two sauce pans, 40 tin cans of one pint each, 40 spoons, one dozen of knives and forks, two close stools, two bed-pans, and two urinals.

A regiment, consisting of 1000 men, and provided with three medical persons, ought to be furnished with hospital necessaries and utensils for at least 40 patients. It should be provided with 40 cotton night caps, 40 sets of bedding, in the proportion of four for every hundred men; each set consisting of one paillasse, one straw mattrass, one bolster, three sheets, two blankets, and one rug.

For regiments of a smaller number, the quantity of hospital necessaries will of course be proportionally reduced.

Bakery UTENSILS. The following list of bakery utensils, being the proportion requisite for an army of 36,000 men, has been extracted from the British commissary, to which useful treatise we refer the military reader for a specific description of field ovens, &c. and field bakery, page 16, &c.

12 double iron ovens, 11 feet long, 9 feet diameter, and 3 feet high; 28 troughs and their covers, 10 feet long, 3 feet wide, and 3 feet deep, to kneed the dough.

12 large canvas tents (having double coverings) 32 feet long, and 24 feet wide, to make the bread in.

4 ditto, to cool and deposit the bread in.

2 ditto, to deposit the meal and empty sacks in.

200 boards, 8 feet long, and 1½ feet wide, to carry the bread to the oven and back when baked; 24 small scales to weigh the dough, with weights from half an ounce to 6lbs.; 24 small lamps for night work; 24 small hatchets; 24 scrapers, to scrape the dough from the troughs; 12 copper kettles, containing each from 10 to 12 pails of water; 12 trevets for ditto; 12 barrels with handles, to carry water, containing each from 6 to 7 pails.

12 pails, to draw water; 24 yokes and hooks, to carry the barrels by hand; 24 iron peles, to shove and draw the bread from the ovens; 24 iron pitchforks, to turn and move the firewood and coals in the ovens; 24 spare handles, 14 feet long, for the peles and pitchforks; 24 rakes, with handles of the same length, to clear away the coals and cinders from the ovens; 4 large scales, to weigh the sacks and barrels of meal, and capable of weighing 500lb.; 4 triangles for the said scales; to each must be added 500lb. of weights, 3 of 100lb. each, 2 of 50lb. each, and downwards to half a pound.

VULNERABLE. Susceptive of wounds; liable to external injuries; capable of being taken; as, the town is extremely vulnerable in such a quarter. It is also applied to military dispositions, viz. the army was vulnerable in the centre or on the left wing.

An assembage of men without arms, or with arms but without discipline, or having discipline and arms, without officers—are *vulnerable.*

W

WAD, (*Bourre*, Fr.) In *gunnery*, a substance made of hay or straw, and sometimes of tow rolled up tight in a ball. It serves to be put into a gun after the powder, and rammed home, to prevent the powder from being scattered, which would have no effect if left unconfined.

Wad-*mill*. A hollow form of wood to make the wads of a proper size.

Wad-*hook*. A strong iron screw, like those that serve for drawing corks, mounted upon a wooden handle, to draw out the wads, or any part of cartridges, which often remain in guns, and when accumulated stop up the vent.

WADA or WADADARY, *Ind.* A farm of a district.

WADABUNDY, *Ind.* Stated periods or dates, on which money is to be paid.

WADADAR, *Ind.* A government officer, who is responsible for the rents of a zemindary.

WADDING. Oakum, hay or straw, or any other article generally carried along with the guns to be made into wads.

Experiments relative to the effects of Wadding. The quantity of powder requisite to raise a shell weighing 218 lb. clear of the mortar and bed was found to be 4 oz. 2 dr. without any wadding; but with the help of a little wadding, rammed over the powder, 3 oz. 1 dr. were sufficient. The powder, requisite to raise a shell weighing 106 lb. clear of the mortar and bed, was found to be 2 oz. 6 dr. without any wadding; but with wadding, properly rammed over the powder, 2 oz. were found to be sufficient.

To raise a shell of 16 lb. 4 dr. were sufficient without wadding, and only 3 dr. with wadding.

And to raise a shell of 8 lb. 2 dr. were enough without wadding, and 1 dr. two-thirds with wadding.

From the above experiments it may be observed, that the judicious ramming of a little wadding over the powder, adds about ¼ part of the whole effect.

WAGGON, in *the army*, (*Chariot*, Fr.) is a four-wheel carriage, drawn by four horses, and for sundry uses.

Ammunition-Waggon. (*Chariot d'artillerie*, Fr.) A carriage made for transporting all kinds of stores, as also to carry bread, it being lined round in the inside with basket-work. See Caisson.

Waggon-*Train*. The waggons, caissons, carts, &c. provided for the use of an army are so called. One great engine, on which the movements of an army depend, is a proper establishment of waggons. In all wars great abuses have, as well as great ignorance, prevailed in this department.

In the seven years war the British had a general contractor for the waggon train, and his contract was kept up until the year before the peace, when that government bought the train of him. In the American war, waggons were considered almost as a privilege by the departments to which they were attached, until Brook Watson was appointed commissary general, who found it necessary to make great reforms in that branch of the service. The same gentleman, when he went out to the continent of Europe with the duke of York in 1793, made use of the waggons of different contractors: but in the beginning of 1794, an experiment was made by raising a corps called the corps of royal waggoners, and purchasing waggons and horses. Its miserable state became proverbial in the army: it failed completely in every part, and on many occasions, the service suffered very materially in consequence of the abuses of contractors.

The idea of this corps was probably taken from the fine well regulated establishment of the French, from whom the Austrians copied it as a standing establishment, having officers and men trained to the service, and a system improved and perfect.

The British waggon-train was sold, and every purchaser of not less than fifty waggons was admitted to the advantages of a contract for all the waggons he purchased; he was insured the duration of his contract for three months, and was only to deposit one-third of the cost, allowing the remainder to be paid out of his earnings. The form of the contract and the pay of the waggons were previously fixed, and by this mode a most advantageous sale was procured, while a new set of contractors were introduced, with the additional advantage of obliging old contractors to reduce their prices, and to come under the same terms.

The space of ground occupied by a waggon with four horses is about 16 yards; a mile will therefore hold 110 waggons; but allowing a short distance between each waggon in travelling, a mile may be said to contain about 100 waggons. Waggons in convoy may travel from one to two miles per hour, according to the roads and other circumstances. A great object in convoys is to preserve the horses as much as possible from fatigue. For this purpose, if the convoy amounts to many hundred waggons, they must be divided into divisions of not more than 500 each. Should it consist of thousands, it will be advisable to divide them into *grand* divisions, and then again into subdivisions of 500 each: by this means, and the time of departure being calculated by the following rules, each division may remain at rest, till just before its time of movement; and which will prevent the necessity of the latter part of a large convoy being harrassed for a considerable time before its turn to move.

Rule 1. *To find the time in which any number of waggons may be driven off:* Divide the number of waggons by 100, and multiply by the time of travelling one mile.

Rule 2. *To find the time in which any number of waggons will drive over any number of miles:* To the time they take in driving off, add the time any one of the waggons takes to travel the distance.

The different divisions of the convoy should be numbered, and obliged each day to change the order of their marching.

WAGGONER, (*Charretier*, Fr.) One who drives a waggon.

Corps of WAGGONERS, (*Corps de Charretiers*, Fr.) A body of men employed in the commissariate, so called.

WAGRAM, *battle of:* Decided the war between France and Austria in 1809.

WAKANAGUR, *Ind.* A writer of occurrences.

WAINROPE. The large cord with which the load is tied on the waggon.

WAIT. To lie in wait; to lay wait. See AMBUSH.

WALL. A series of brick, stone, or other materials carried upwards and cemented with mortar. When used in the plural number, wall signifies fortification; works built for defence.

To be driven to the WALL, (*Etre acculé*, Fr.) A figurative term signifying to be so pressed, that you can neither advance nor retreat.

WALLS *of a Tent or Marquee.* That part of the canvas which is attached to the fly or top by means of hooks and eyes, and which is fixed to the earth with wooden pegs. These walls should be frequently lowered in order to admit fresh air. When there is an hospital tent, this precaution is indispensible, if the weather will permit.

WALLET. See HAVERSACK, KNAPSACK.

WALLOON, Spanish troops from the Netherlands.

WAPENTAKE, (from the Saxon.) The same as what we call a hundred, and more especially used in the northern counties of England beyond the Trent. There have been several conjectures as to the original of the word; one of which is, that anciently musters were made of the armor and weapons of the inhabitants of every hundred; and from those that could not find sufficient pledges of their good abearing, their weapons were taken away; whence it is said *Wapentake* is derived. *Spenser* says it was so named, of touching the weapon or spear of their alderman, and swearing to follow him faithfully, and serve their prince truly.

WAR. A contest or difference between princes, states, or large bodies of people, which, not being determinable by the ordinary measures of justice and equity, is referred to the decision of the sword, &c.

It is that important event, for which all military education is designed to prepare the soldier. It is for this that in peace, he receives the indulgence of a subsistence from society; and for this he is gratefully bound to secure the repose of that society from the outrage of an enemy and to guard its possessions from the devastations of invaders.

It would be needless as impossible to show, how often the art of war has accomplished the design of its institution; we shall, however, distinguish those English wars which are remarkable in history.

War with Scotland, 1068.

Peace with
- ditto, 1113.
- France, 1113.

War with France, 1116.

Peace with
- ditto, 1118.
- Scotland, 1139.

War with France, 1161.

Peace with ditto, 1186.

War again with France, 1194.

Peace with ditto, 1195.

Civil war
- renewed, 1215.
- ended, 1216.
- with France, 1224.
- ended, 1243.
- 1262.
- ended, 1267.
- with France, 1294.
- with Scotland, 1296.

Peace
- with France, 1299.
- with Scotland, 1323.

War
- again with Scotland, 1327.
- ended, 1328.
- again with Scotland, 1333.
- with France, 1339.

Peace with France, May 8, 1360.

War
- with France, 1368.
- civil, 1400.
- with Scotland, 1400.

Peace with France, May 31, 1420.

War
- with France, 1422
- civil between York and Lancaster, 1452.

Peace with France, Oct. 1741.

War
- civil, 1486.
- with France, Oct. 6, 1492.

Peace
- with ditto, Nov. 3, 1492.
- with Scotland, 1502.

War
- with France, Feb. 4, 1512.
- with Scotland, 1513.

Peace with France, Aug. 7, 1514.

War with
- ditto, 1522.
- Scotland, 1522.

Peace with
- France, 1527.
- Scotland, 1542.

War with Scotland, directly after.

Peace with France and Scotland, June 7, 1546.

War with
- Scotland, 1547.
- France, 1549.

Peace with both, March 6, 1550.

War
- civil, 1553.
- with France, June 7, 1557.
- with Scotland, 1557.

Peace with
- France, April 2, 1559.
- Scotland, 1560.

War	with France	1562.
Peace		1564.

War with
- Scotland, 1570.
- Spain 1588.

Peace with ditto, Aug. 18, 1604.

War with { Spain, 1624.
France, 1627.

Peace with Spain and France, April 14, 1629.

War { civil, 1642.
with the Dutch, 1651.

Peace with ditto, April 5, 1654.

War with Spain, 1655.

Peace with Spain, Sept. 10, 1660.

War with { France, Jan. 26, 1666.
Denmark, Oct. 19, 1666.

Peace with the French, Danes, and Dutch, Aug. 24, 1667.

Peace with Spain, Feb. 13, 1668.

War with the Algerines, Sept. 6, 1669.

Peace with ditto, Nov. 19, 1671.

War with the Dutch, March, 1672.

Peace with ditto, Feb. 28, 1674.

War with France, May 7, 1689.

Peace general, Sept. 20, 1697.

War with France, May 4, 1702.

Peace of Utrecht, March 13, 1713.

War with Spain, Dec. 1718.

Peace with ditto, 1721.

War with { Spain, 1739.
France, March 31, 1744.

War with { France, 1756.
Spain, Jan. 4, 1762.

Peace with France and Spain, Feb. 10, 1763.

War with the caribbs of St. Vincent in 1773.

War { against America, commenced July 14, 1774.

War { with France, Feb. 6, 1778.
with Spain, April 17, 1780.
with Holland, 1780.

Peace with America,
France,
Spain,
Holland, } Sept. 3, 1783.

War against France by the English, Prussians, Austrians, and other German powers, in 1793, called the *first coalition.*

Peace between Prussia and the French Republic, 1795.

Peace between Spain and the French Republic, 1795.

Peace between the French and the Sardinians in 1796.

Peace between the French and the Austrians in 1797.

War between the British and Tippoo Saib in India, in 1797.

War against the French or the second coalition of the Austrians, Russians, Neapolitans, &c. 1798.

War with the Turks, and the invasion of Egypt, in 1798.

Peace between the French and the Russians in 1799.

Peace between the French and Austrians in 1800.

Preliminaries of peace commenced between the French and the Ottoman empire in consequence of the reduction of Egypt by the British forces in 1801.

Preliminaries of peace between France and Great Britain, &c. called the peace of Amiens, 1801.

War renewed against France in 1804 by England.

War renewed by Austria in 1805.

War by Prussia in 1806.

War renewed by Austria in April 1809. See *Historical Dictionary* of wars, battles, sieges, by the American editor of this work.

There are five different kinds of war, each of which is to be conducted differently the one from the other, viz. the offensive; the defensive; that between equal powers; the auxiliary, which is carried on out of our own territories to succor a state or ally, or to assist a weaker whom a more powerful nation has attacked; and a civil war.

Offensive war must be long meditated on in private before it be openly entered upon; when the success will depend upon two essential points: that the plan be justly formed, and the enterprize conducted with order. It should be well and maturely considered and digested, and with the greatest secrecy, lest, however able the leaders or council may be, some of the precautions necessary to be taken, be discovered. These precautions are infinite both at home and abroad.

Abroad, they consist in alliances and security not to be disturbed in the meditated expedition, foreign levies, and the buying up of warlike ammunition, as well to increase our own stores as to prevent the enemy from getting them.

The precautions at home, consist in providing for the security of our distant frontiers, levying new troops, or augmenting the old ones, with as little noise as possible; furnishing your magazines with ammunition; constructing carriages for artillery and provisions; buying up horses, which should be done as much as possible among your neighbors; both to prevent their furnishing the enemy, and to preserve your own for the cavalry and the particular equipages of the officers.

Defensive war, may be divided into three kinds. It is either a war sustained by a nation, which is suddenly attacked by another who is superior in troops and in means; or a nation makes this sort of war by choice on one side of its frontiers, while it carries on offensive war elsewhere; or it is a war become defensive by the loss of a battle.

A *defensive* war which a nation attacked by a superior enemy sustains, depends entirely upon the capacity of the general. His particular application should be, to chuse advantageous camps to stop the enemy, without, however, being obliged to fight him; to multiply small advantages; to harass and perplex the enemy in his foraging parties, and to oblige them to do it with great escorts; to attack their convoys; to render the passages of rivers or defiles as difficult to them as possible; to force them to keep together: if they want to attack a town, to throw in succors before it is invested; in short, in the beginning his chief aim should be, to acquire the enemy's respect by his vigilance and activity, and by forcing him to be circumspect in his marches and manner of encampment, to gain time himself, and make the enemy lose it. An able general, carefully pursuing these maxims, will give courage to his soldiers, and to the inhabitants of the country; he gives time to his government to take proper precautions to resist the enemy who attacks him; and thus changes the nature of this disagreeable and vexatious kind of warfare.

The management of a defensive war requires more military judgment than that of an offensive one.

A war between equal powers, is that in which the neighboring states take no part, so long as the belligerent parties obtain no great advantage, the one over the other. This sort of war never should last long if you want to reap any advantages from it. As to its rules, they are entirely conformable to those already given; but we may look on it as a certain maxim in this sort of war, that the general who is the most active and penetrating, will ever in the end prevail over him, who possesses these qualities in a lesser degree; because, by his activity and penetration, he will multiply small advantages, till at last they procure him a decisive superiority. A general who is continually attentive to procure himself small advantages, ever obtains his end, which is to ruin the enemy's army; in which case he changes the nature of the war, and makes it offensive; which should ever be the chief object of his prince.

Auxiliary WAR, is that in which a nation succors its neighbors, either in consequence of alliances or engagements entered into with them; or sometimes to prevent their falling under the power of an ambitious prince.

If it is in virtue of treaties, he observes them religiously, in furnishing the number of troops prescribed, and even offering to augment his quota, if required; or in making a diversion by attacking the common enemy, or its allies.

If it is to prevent a neighboring prince from being crushed by a power, who after this conquest may become dangerous to yourself, there are several measures to be taken for your own particular interest. One of the chief is, to exact from those you succor, the possession of some place in security, lest they make their peace without your knowlege, or to your prejudice.

The general, therefore, who is chosen for the command of this auxiliary corps, should have wisdom, penetration, and foresight; wisdom, to preserve a proper discipline in his corps, that the allied prince may have no cause to complain of him; foresight and penetration, to prevent his troops suffering for want of subsistence, or being exposed to the perils of war, but in proportion to their numbers with those of the allied prince; and, finally, that nothing shall pass without his knowlege, which may be prejudicial to his master.

Civil or intestine WAR, is that between subjects of the same realm, or between parties in the same state. In this sense we say, the civil wars of the Romans destroyed the republic; the civil wars of Grenada ruined the power of the Moors in Spain: the civil wars in England began 1641, and ended in the tyrant's death.

Religious WAR, is war maintained in a state on account of religion, one of the parties refusing to tolerate the other.

Holy WAR, is that species of warfare which was anciently maintained by leagues and crusades, for the recovery of the Holy Land.

Civil and religious WARS are ever unhappy for the states who sustain them. These sorts of war, which the animosity of the different parties, and fanaticism, always carry beyond the bounds of humanity, and the duties of society, have in general, no other rules but those of the *offensive* and *defensive*. It has however always been observed, that civil wars form great men and good soldiers; because the rich and poor, citizens and laborers, being equally obliged to fight for their property and preservation, have all an opportunity of learning the art of war. This species of war may likewise be called revolutionary, with the additional circumstance, that in the latter sense it is of a more extensive nature.

WAR *of opinion*. See OPINION.

Articles of WAR.

SECT. I. *Be it enacted by the senate and house of representatives of the United States of America, in Congress assembled*, That from and after the passing of this act, the following shall be the rules and articles by which the armies of the United States shall be governed:

Art. 1. Every officer now in the army of the United States, shall, in six months from the passing of this act, and every officer who shall hereafter be appointed, shall before he enters on the duties of his office, subscribe these rules and regulations.

Art. 2. It is earnestly recommended to all officers and soldiers diligently to attend divine service; and all officers who shall behave indecently or irreverently at any place of divine worship, shall, if commissioned officers, be brought before a general court-martial, there to be publicly and severely reprimanded by the president; if non-commissioned officers or soldiers, every person so offending shall, for his first offence, forfeit *one sixth of a dollar*, to be deducted out of his next pay; for the second offence, he shall not only forfeit a like sum, but be confined twenty-four hours; and for every like offence shall suffer and pay in like manner; which money, so forfeited, shall be applied by the captain or senior officer of the troop or company, to the use of the sick soldiers of the company or troop to which the offender belongs.

Art. 3. Any non-commissioned officer or soldier who shall use any profane oath or execration shall incur the penalties expressed in the foregoing article, and a commissioned officer shall forfeit and pay for each and every such offence one dollar, to be applied as in the preceding article.

Art. 4. Every chaplain commissioned in the army or armies of the United States, who shall absent himself from the duties assigned him (except in cases of sickness or leave of absence) shall, on conviction thereof before a court-martial, be fined not exceeding one month's pay, besides the loss of his pay during his absence; or be discharged, as the said court-martial shall judge proper.

Art. 5. Any officer or soldier who shall use contemptuous or disrespectful words against the president of the United States, against the vice-president thereof, against the congress of the United States, or against the chief magistrate or legislature of any of the United States in which he may be quartered, if a commissioned officer, shall be cashiered, or otherwise punished as a court-martial shall direct; if a non-commissioned officer or soldier, he shall suffer such punishment as shall be inflicted on him by the sentence of a court-martial.

Art. 6. Any officer or soldier who shall behave himself with contempt or disrespect towards his commanding officer, shall be punished according to the nature of his offence, by the judgment of a court-martial.

Art. 7. Any officer or soldier who shall begin, excite, cause, or join in any mutiny or sedition in any troop or company in the service of the United States, or in any party, post, detachment, or guard, shall suffer death, or such other punishment as by a court-martial shall be inflicted.

Art. 8. Any officer, non-commissioned officer, or soldier, who, being present at any mutiny or sedition, does not use his utmost endeavor to suppress the same, or coming to the knowlege of any intended mutiny, does not without delay, give information thereof to his commanding officer, shall be punished by the sentence of a court-martial with death or otherwise, according to the nature of his offence.

Art. 9. Any officer or soldier who shall strike his superior officer, or draw or lift up any weapon, or offer any violence against him, being in the execution of his office, on any pretence whatsoever, or shall disobey any lawful command of his superior officer, shall suffer death, or such other punishment as shall, according to the nature of his offence, be inflicted upon him by the sentence of a court-martial.

Art. 10. Every non-commissioned officer, or soldier, who shall inlist himself in the service of the United States, shall, at the time of his so inlisting, or within six days afterwards, have the articles for the government of the armies of the United States, read to him, and shall, by the officer who inlisted him, or by the commanding officer of the troop or company into which he was inlisted, be taken before the next justice of the peace, or chief magistrate of any city or town corporate, not being an officer of the army, or where recourse cannot be had to the civil magistrate, before the judge advocate, and, in his presence, shall take the following oath or affirmation: " I A. B. do solemnly swear, or affirm, (as the case may be) that I will bear true allegiance to the United States of America, and that I will serve them honestly and faithfully against all their enemies, or opposers, whatsoever, and observe and obey the orders of the president of the United States, and the orders of the officers appointed over me, according to the rules and articles for the government of the armies of the United States." Which justice, magistrate, or judge advocate is to give the officer a certificate, signifying that the man inlisted, did take the said oath, or affirmation.

Art. 11. After a non-commissioned officer or soldier, shall have been duly inlisted and sworn, he shall not be dismissed the service without a discharge in writing; and no discharge granted to him shall be sufficient, which is not signed by a field officer of the regiment to which he belongs, or commanding officer, where no field officer of the regiment is present; and no discharge shall be given to a non-commissioned officer or soldier, before his term of service has expired, but by order of the president, the secretary of war, the commanding officer of a department, or the sentence of a general court-martial, nor shall a commissioned officer be discharged the service, but by order of the president of the United States, or by sentence of a general court-martial.

Art. 12. Every colonel, or other officer commanding a regiment, troop, or company, and actually quartered with it, may give furloughs to non-commissioned officers or soldiers, in such numbers, and for so long a time as he shall judge to be most consistent with the good of the service; and a captain or other inferior officer commanding a troop or company, or in any garrison, fort or barrack of the United States, (his field officer being absent), may give furloughs to non-commissioned officers or soldiers, for a time not exceeding twenty days in six months, but not to more than two persons to be absent at the same time, excepting some extraordinary occasion should require it.

Art. 13. At every muster, the commanding officer of each regiment, troop, or company there present, shall give to the commissary of musters, or other officer who musters the said regiment, troop, or company, certificates signed by himself, signifying how long such officers, as shall not appear at the said muster, have been absent, and the reason of their absence. In like manner, the commanding officer of every troop, or company, shall give certificates, signifying the reasons of the absence of the non-commissioned officers and private soldiers, which reasons, and time of absence, shall be inserted in the muster-rolls opposite the name of the respective absent officers and soldiers. The certificates shall, together with the muster-rolls, be remitted by the commissary of musters, or other officer mustering, to the department of war as speedily as the distance of the place will admit.

Art. 14. Every officer who shall be convicted, before a general court-martial, of having signed a false certificate, relating to the absence of either officer or private soldier, or relative to his or their pay, shall be cashiered.

Art. 15. Every officer who shall knowingly make a false muster of man or horse, and every officer or commissary of musters, who shall willingly sign, direct or allow the signing of muster-rolls, wherein such false muster is contained, shall, upon proof made thereof by two witnesses, before a general court-martial, be cashiered, and shall be therefore utterly disabled to have or hold any office or employment in the service of the United States.

Art. 16. Any commissary of musters or other officer, who shall be convicted of having taken money or other thing, by way of gratification, on the mustering any regiment, troop or company, or on the signing muster-rolls, shall be displaced from his office, and shall be thereby utterly disabled to have or hold any office or employment in the service of the United States.

Art. 17. Any officer who shall presume to muster a person as a soldier, who is not a soldier, shall be deemed guilty of having made a false muster, and shall suffer accordingly.

Art. 18. Every officer who shall knowingly make a false return to the department of war, or to any of his superior officers, authorised to call for such returns, of the state of the regiment, troop, or company, or garrison, under his command; or of the arms, ammunition, clothing, or other stores thereunto belonging, shall, on conviction thereof before a court-martial, be cashiered.

Art. 19. The commanding officer of every regiment, troop, or independent company, or garrison of the United States, shall, in the beginning of every month, remit through the proper channels, to the department of war, an exact return of the regiment, troop, independent company, or garrison, under his command, specifying the names of officers then absent from their posts, and the reasons for, and the time of their absence. And any officer who shall be convicted of having, through neglect or design, omitted sending such returns, shall be punished according to the nature of his crime, by the judgment of a general court-martial.

Art. 20. All officers and soldiers, who have received pay, or have been duly inlisted in the service of the United States, and shall be convicted of having deserted the same, shall suffer death, or such other punishment as by sentence of a court-martial shall be inflicted.

Art. 21. Any non-commissioned officer or soldier, who shall, without leave from his commanding officer, absent himself from his troop, company, or detachment, shall, upon being convicted thereof, be punished according to the nature of his offence at the discretion of a court-martial.

Art. 22. No non-commissioned officer or soldier, shall inlist himself in any other regiment, troop, or company, without a regular discharge from the regiment, troop, or company, in which he last served, on the penalty of being reputed a deserter, and suffering accordingly. And in case any officer shall knowingly receive and entertain such non-commissioned officer or soldier, or shall not, after his being discovered to be a deserter, immediately confine him, and give notice thereof to the corps in which he last served, the said officer shall by a court-martial be cashiered.

Art. 23. Any officer or soldier, who shall be convicted of having advised or persuaded any other officer or soldier, to desert the service of the United States, shall suffer death, or such other punishment as shall be inflicted upon him by the sentence of a court-martial.

Art. 24. No officer or soldier shall use any reproachful or provoking speeches or gestures to another, upon pain, if an officer, of being put in arrest; if a soldier, confined, and of asking pardon of the party offended, in the presence of his commanding officer.

Art. 25. No officer or soldier shall send a challenge to another officer or soldier, to fight a duel, or accept a challenge, if sent, upon pain, if a commissioned officer, of being cashiered; if a non-commissioned officer or soldier, of suffering corporeal punishment at the discretion of a court-martial.

Art. 26. If any commissioned or non-commissioned officer commanding a guard, shall knowingly or willingly suffer any person whatsoever to go forth to fight a duel, he shall be punished as a challenger; and all seconds, promoters and carriers of challenges, in order to duels, shall be deemed pincipals, and be punished accordingly. And it shall be the duty of every officer, commanding an army, regiment, company, post, or detachment, who is knowing to a challenge being given, or accepted, by any officer, non-commissioned officer, or soldier, under his command, or has reason to believe the same to be the case, immediately to arrest and bring to trial such offenders.

Art. 27. All officers, of what condition soever, have power to part and quell all quarrels, frays, and disorders, though the persons concerned should belong to another regiment, troop, or company; and either to order officers into arrest, or non-commissioned officers or soldiers into confinement, until their proper superior officers shall be acquainted therewith; and whosoever shall refuse to obey such officer (though of an inferior rank) or shall draw his sword upon him, shall be punished at the discretion of a general court-martial.

Art. 28. Any officer or soldier, who shall upbraid another for refusing a challenge, shall himself be punished as a challenger; and all officers and soldiers are hereby discharged from any disgrace or opinion of disadvantage, which might arise from their having refused to accept of challenges, as they will only have acted in obedience to the laws, and done their duty as good soldiers, who subject themselves to discipline.

Art. 29. No sutler shall be permitted to sell any kind of liquors or victuals, or to keep their houses or shops open for the entertainment of soldiers, after nine at night, or before the beating of the reveilles, or upon Sundays, during divine service or sermon, on the penalty of being dismissed from all future sutling.

Art. 30. All officers commanding in the field, forts, barracks, or garrisons of the United States, are hereby required to see that the persons permitted to sutle, shall supply the soldiers with good and wholesome provisions, or other articles, at a reasonable price, as they shall be answerable for their neglect.

Art. 31. No officer commanding in any of the garrisons, forts, or barracks of the United States, shall exact exorbitant prices for houses or stalls let out to sutlers, or connive at the like exactions in others; nor by his own authority, and for his private advantage, lay any duty or imposition upon, or be interested in the sale of any victuals, liquors, or other necessaries of life, brought into the garrison, fort, or barracks, for the use of the soldiers, on the penalty of being discharged from the service.

Art. 32. Every officer commanding in quarters, garrisons, or on the march, shall keep good order, and to the utmost of his power, redress all abuses or disorders, which may be committed by any officer or soldier under his command; if upon complaint made to him of officers or soldiers beating, or otherwise ill treating any person, of disturbing fairs or markets, or of committing any kinds of riots, to the disquieting of the citizens of the United States, he, the said commander, who shall refuse or omit to see justice done to the offender or offenders, and reparation made to the party or parties injured, as far as part of the offender's pay shall enable him or them, shall, upon proof thereof, be cashiered or punished, as a general court-martial shall direct.

Art. 33. When any commissioned officer or soldier, shall be accused of a capital crime, or of having used violence, or committed any offence against the persons or property of any citizen of any of the United States, such as is punishable by the known laws of the land, the commanding officer, and officers of every regiment, troop, or company, to which the person or persons, so accused, shall belong, are hereby required, upon application duly made by, or in behalf of the party, or parties injured, to use their utmost endeavors to deliver over such accused person or persons, to the civil magistrate, and likewise to be aiding and assisting to the officers of justice, in apprehending and securing the person or persons so accused, in order to bring him or them to trial. If any commanding officer or officers, shall wilfully neglect, or shall refuse, upon the application aforesaid, to deliver over such accused person or persons, to the civil magistrates, or to be aiding and assisting to the officers of justice in apprehending such person or persons, the officer or officers, so offending, shall be cashiered.

Art. 34. If any officer shall think himself wronged by his colonel, or the commanding officer of the regiment, and shall, upon due application being made to him, be refused redress, he may complain to the general, commanding in the state, or territory where such regiment shall be stationed, in order to obtain justice; who is hereby required to examine into the said complaint, and take proper measures for redressing the wrong complained of, and transmit as soon as possible, to the department of war, a true state of such complaint, with the proceedings had thereon.

Art. 35. If any inferior officer, or soldier, shall think himself wronged by his captain, or other officer, he is to complain thereof to the commanding officer of the regiment, who is hereby required to summon a regimental court-martial, for the doing justice to the complainant; from which regimental court-martial, either party may, if he thinks himself still aggrieved, appeal to a general court-martial. But if, upon a second hearing, the appeal shall appear vexatious and groundless, the person, so appealing, shall be punished at the discretion of the said court-martial.

Art. 36. Any commissioned officer, store keeper, or commissary, who shall be convicted, at a general court-martial, of having sold, without a proper order for that purpose, embezzled, misapplied, or wilfully, or through neglect, suffered any of the provisions, forage, arms, clothing, ammunition, or other military stores, belonging to the United States, to be spoiled, or damaged, shall at his own expence, Art. 37. Any non-commissioned officer or soldier, who shall be convicted, at a regimental court-martial, of having sold, or designedly, or through neglect, wasted the ammunition delivered out to him, to be employed in the service of the United States, shall be punished at the discretion of such court.

Art. 38. Every non-commissioned officer or soldier, who shall be convicted before a court-martial, as having sold, lost, or spoiled, through neglect, his horse, arms, clothes, or accoutrements, shall be put under such weekly stoppages (not exceeding the half of his pay) as such court-martial shall judge sufficient for repairing the loss or damage; and shall suffer confinement or such other corporeal punishment as his crime shall deserve.

Art. 39. Every officer, who shall be convicted before a court-martial, of having embezzled, or misapplied any money with which he may have been entrusted, for the payment of the men under his command, or for enlisting men into the service, or for other purposes, if a commissioned officer, shall be cashiered, and compelled to refund the money; if a non-commissioned officer, shall be reduced to the ranks, be put under stoppages until the money be made good, and suffer such corporeal punishment as such court-martial shall direct.

Art. 40. Every captain of a troop, or company, is charged with the arms, accoutrements, ammunition, clothing, or other warlike stores belonging to the troop, or company under his command, which he is to be accountable for to his colonel, in case of their being lost, spoiled, or damaged, not by unavoidable accidents, or on actual service.

Art. 41. All non-commissioned officers and soldiers, who shall be found one mile from the camp, without leave, in writing, from their commanding officer, shall suffer such punishment as shall be inflicted upon them by the sentence of a court-martial.

Art. 42. No officer or soldier, shall lie out of his quarters, garrison, or camp, without leave from his superior officer, upon penalty of being punished according to the nature of his offence, by the sentence of a court-martial.

Art. 43. Every non-commissioned officer and soldier shall retire to his quarters or tent, at the beating of the retreat; in default of which he shall be punished according to the nature of his offence.

Art. 44. No officer, non-commissioned officer or soldier, shall fail in repairing, at the time fixed, to the place of parade, of exercise or other rendezvous, appointed by his commanding officer, if not prevented by sickness, or some other evident necessity; or shall go from the said place of rendezvous, without leave from his nature of his offence by the sentence of a court-martial.

Art. 45. Any commissioned officer, who shall be found drunk on his guard, party, or other duty, shall be cashiered. Any non-commissioned officer or soldier so offending, shall suffer such corporeal punishment as shall be inflicted by the sentence of a court-martial.

Art. 46. Any centinel who shall be found sleeping upon his post, or shall leave it before he shall be regularly relieved, shall suffer death, or such other punishment as shall be inflicted by the sentence of a court-martial.

Art. 47. No soldier belonging to any regiment, troop, or company, shall hire another to do his duty for him, or be excused from duty, but in cases of sickness, disability, or leave of absence; and every such soldier found guilty of hiring his duty, as also the party so hired to do another's duty, shall be punished at the discretion of a regimental court-martial.

Art. 48. And every non-commissioned officer conniving at such hiring of duty aforesaid, shall be reduced; and every commissioned officer, knowing and allowing such ill practices in the service, shall be punished by the judgment of a general court-martial.

Art. 49. Any officer belonging to the service of the United States, who, by discharging of firearms, drawing of swords, beating of drums, or by any other means whatsoever, shall occasion false alarms in camp, garrison, or quarters, shall suffer death, or such other punishment as shall be ordered by the sentence of a general court-martial.

Art. 50. Any officer or soldier, who shall, without urgent necessity, or without the leave of his superior officer, quit his guard, platoon, or division, shall be punished according to the nature of his offence, by the sentence of a court-martial.

Art. 51. No officer or soldier shall do violence to any person who brings provisions or other necessaries to the camp, garrison or quarters, of the forces of the United States, employed in any parts out of the said states, upon pain of death, or such other punishment as a court-martial shall direct.

Art. 52. Any officer or soldier, who shall misbehave himself before the enemy, run away, or shamefully abandon any fort, post, or guard, which he or they may be commanded to defend, or speak words inducing others to do the like; or shall cast away his arms and ammunition, or who shall quit his post or colors to plunder and pillage, every such offender being duly convicted thereof, shall suffer death, or such other punishment as shall be ordered by the sentence of a general court-martial.

Art. 53. Any person belonging to the armies of the United States, who shall make known the watch-word to any person who is not entitled to receive it, according to the rules and discipline of war, or shall presume to give a parole or watch-word, different from what he received, shall suffer death, or such other punishment as shall be ordered by the sentence of a general court-martial.

Art. 54. All officers and soldiers are to behave themselves orderly in quarters, and on their march; and whosoever shall commit any waste, or spoil, either in walks of trees, parks, warrens, fish ponds, houses, or gardens, corn fields, enclosures of meadows, or shall maliciously destroy any property whatsoever, belonging to the inhabitants of the United States, unless by order of the then commander in chief of the armies of the said states, shall (besides such penalties as they are liable to by law,) be punished according to the nature and degree of the offence, by the judgment of a regimental or general court-martial.

Art. 55. Whosoever, belonging to the armies of the United States, employed in foreign parts, shall force a safe-guard, shall suffer death.

Art. 56. Whosoever shall relieve the enemy with money, victuals, or ammunition, or shall knowingly harbor or protect an enemy, shall suffer death, or such other punishment as shall be ordered by the sentence of a court-martial.

Art. 57. Whosoever shall be convicted of holding correspondence with, or giving intelligence to the enemy, either directly or indirectly, shall suffer death, or such other punishment as shall be ordered by the sentence of a court-martial.

Art. 58. All public stores taken in the enemy's camp, towns, forts, or magazines, whether of artillery, ammunition, clothing, forage, or provisions, shall be secured for the service of the United States; for the neglect of which the commanding officer is to be answerable.

Art. 59. If any commander of any garrison, fortress or post, shall be compelled, by the officers and soldiers under his command, to give up to the enemy, or to abandon it; the commissioned officers, non-commissioned officers, or soldiers, who shall be convicted of having so offended, shall suffer death, or such other punishment as shall be inflicted upon them by the sentence of a court-martial.

Art. 60. All sutlers and retainers to the camp, and all persons whatsoever, serving with the armies of the U. States in the field, though not inlisted soldiers, are to be subject to orders, according to the rules and discipline of war.

Art. 61. Officers having brevets, or commissions, of a prior date to those of the regiment in which they serve, may take place in courts-martial and on detachments, when composed of different corps, according to the ranks given them in their brevets, or dates of their former commissions; but in the regiment, troop, or company, to which such officers belong, they shall do duty and take rank, both in courts-martial and on detachments, which shall be composed only of their own corps, according to the commissions by which they are mustered in the said corps.

Art. 62. If upon marches, guards, or in quarters, different corps of the army shall happen to join, or do duty together, the officer highest in rank of the line of the army, marine corps, or militia, by commission there, on duty, or in quarters, shall command the whole, and give orders for what is needful to the service, unless otherwise specially directed by the president of the U. States, according to the nature of the case.

Art. 63. The functions of the engineers being generally confined to the most elevated branch of military science, they are not to assume, nor are they subject to be ordered on any duty beyond the line of their immediate profession, except by the special order of the president of the U. States; but they are to receive every mark of respect, to which their rank in the army may entitle them, respectively, and are liable to be transferred, at the discretion of the president, from one corps to another, regard being paid to rank.

Art. 64. General courts-martial may consist of any number of commissioned officers, from five to thirteen, inclusively, but they shall not consist of less than thirteen, where that number can be convened, without manifest injury to the service.

Art. 65. Any general officer commanding an army, or colonel commanding a separate department, may appoint general courts-martial, whenever necessary. But no sentence of a court-martial shall be carried into execution until after the whole proceedings shall have been laid before the officer ordering the same, or the officer commanding the troops for the time being; neither shall any sentence of a general court-martial, in time of peace, extending to the loss of life, or the dismission of a commissioned officer, or which shall, either in time of peace or war, respect a general officer, be carried into execution, until after the whole proceedings shall have been transmitted to the secretary of war, to be laid before the president of the U. States, for his confirmation or disapproval, and orders in the case. All other sentences may be confirmed and executed by the officer ordering the court to assemble, or the commanding officer, for the time being, as the case may be.

Art. 66. Every officer commanding a regiment, or corps, may appoint, for his own regiment, or corps, courts-martial, to consist of three commissioned officers, for the trial and punishment of offences, not capital, and decide upon their sentences. For the same purpose, all officers, commanding any of the garrisons, forts, barracks, or other places, where the troops consist of different corps, may assemble courts-martial, to consist of three commissioned officers, and decide upon their sentences.

Art. 67. No garrison, or regimental court-martial shall have the power to try capital cases, or commissioned officers; neither shall they inflict a fine exceeding one month's pay, nor imprison, nor put to hard labor, any non-commissioned officer or soldier, for a longer time than one month.

Art. 68. Whenever it may be found convenient and necessary to the public service, the officers of the marines shall be associated with the officers of the land forces, for the purpose of holding courts-martial and trying offenders belonging to either; and in such cases the orders of the senior officer of either corps, who may be present and duly authorised, shall be received and obeyed.

Art. 69. The judge advocate, or some person deputed by him, or by the general or officer commanding the army, detachment, or garrison, shall prosecute in the name of the U. States, but shall so far consider himself as counsel for the prisoner, after the said prisoner shall have made his plea, as to object to any leading question to any of the witnesses, or any question to the prisoner, the answer to which might tend to criminate himself; and to administer to each member of the court, before they proceed upon any trial, the following oath, which shall also be taken by all members of the regimental and garrison courts-martial:

"You A. B. do swear that you will well and truly try and determine, according to evidence, the matter now before you, between the United States of America and the prisoner to be tried; and that you will duly administer justice, according to the provisions of 'An act establishing rules and articles for the government of the armies of the United States,' without partiality, favor, or affection: and if any doubt shall arise, not explained by said articles, according to your conscience, the best of your understanding, and the custom of war in like cases: and you do further swear, that you will not divulge the sentence of the court until it shall be published by the proper authority: neither will you disclose or discover the vote or opinion of any particular member of the court-martial, unless required to give evidence thereof as a witness, by a court of justice, in a due course of law. *So help you God.*"

And as soon as the said oath shall have been administered to the respective members, the president of the court shall administer to the judge advocate, or person officiating as such, an oath in the following words:

"You A. B. do swear, that you will not disclose or discover the vote or opinion of any particular member of the court-martial, unless required to give evidence thereof as a witness, by a court of justice in due course of law; nor divulge the sentence of the court to any but the proper authority, until it shall be duly disclosed by the same. *So help you God.*"

Art. 70. When a prisoner arraigned before a general court-martial shall, from obstinacy and deliberate design, stand mute or answer foreign to the purpose, the court may proceed to trial and judgment as if the prisoner had regularly pleaded not guilty.

Art 71. When a member shall be challenged by a prisoner, he must state his cause of challenge, of which the court shall, after due deliberation, determine the relevancy or validity, and decide accordingly; and no challenge to more than one member at a time shall be received by the court.

Art. 72. All the members of a court-martial are to behave with decency and calmness; and in giving their votes, are to begin with the youngest in commission.

Art. 73. All persons who give evidence before a court-martial, are to be examined on oath or affirmation in the following form:

"You swear or affirm (as the case may be) the evidence you shall give in the cause now in hearing, shall be the truth, the whole truth, and nothing but the truth. *So help you God.*"

Art. 74. On the trials of cases not capital, before courts-martial, the deposition of witnesses not in the line or staff of the army, may be taken before some justice of the peace, and read in evidence: provided, the prosecutor and the person accused are present at the taking the same, or are duly notified thereof.

Art. 75. No officer shall be tried but by a general court-martial, nor by officers of an inferior rank, if it can be avoided: nor shall any proceedings or trials be carried on excepting between the hours of eight in the morning, and three in the afternoon, excepting in cases, which, in the opinion, of the officer appointing the court-martial, require immediate example.

Art. 76. No person whatsoever shall use any menacing words, signs, or gestures, in presence of a court-martial, or shall cause any disorder or riot, or disturb their proceedings, on the penalty of being punished, at the discretion of the said court-martial.

Art. 77 Whenever any officer shall be charged with a crime, he shall be arrested and confined in his barracks, quarters, or tent, and deprived of his sword, by the commanding officer. And any officer who shall leave his confinement before he shall be set at liberty by his commanding officer, or by a superior officer, shall be cashiered.

Art. 78. Non-commissioned officers and soldiers, charged with crimes, shall be confined, until tried by a court-martial, or released by proper authority.

Art. 79. No officer or soldier who shall be put in arrest, shall continue in confinement more than eight days, or until such time as a court-martial can be assembled.

Art. 80. No officer commanding a guard, or provost marshal, shall refuse to receive or keep any prisoner committed to his charge, by an officer belonging to the forces of the United States; provided the officer committing, shall, at the same time, deliver an account in writing, signed by himself, of the crime with which the said prisoner is charged.

Art. 81. No officer commanding a guard, or provost marshal, shall presume to release any person committed to his charge, without proper authority for so doing, nor shall he suffer any person to escape, on the penalty of being punished for it by the sentence of a court-martial.

Art. 82. Every officer or provost marshal, to whose charge prisoners shall be committed, shall, within twenty four hours after such commitment, or as soon as he shall be relieved from his guard, make report in writing, to the commanding officer, of their names, their crimes, and the names of the officers who committed them, on the penalty of being punished for disobedience or neglect, at the discretion of a court-martial.

Art. 83. Any commissioned officer convicted before a general court-martial of conduct unbecoming an officer and a gentleman, shall be dismissed the service.

Art. 84. In cases where a court-martial may think it proper to sentence a commissioned officer to be suspended from command, they shall have power also to suspend his pay and emoluments for the same time, according to the nature and heinousness of the offence.

Art. 85. In all cases where a commissioned officer is cashiered for cowardice or fraud, it shall be added in the sentence, that the crime, name, and place of abode and punishment of the delinquent, be published in the newspapers in and about the camp, and of the particular state from which the offender came, or where he usually resides, after which it shall be deemed scandalous for an officer to associate with him.

Art. 86. The commanding officer of any post or detachment, in which there shall not be a number of officers adequate to form a general court-martial, shall, in cases which require the cognizance of such a court, report to the commanding officer of the department, who shall order a court to be assembled at the nearest post or detachment, and the party accused, with necessary witnesses, to be transported to the place where the said court shall be assembled.

Art. 87. No person shall be sentenced to suffer death, but by the concurrence of two thirds of the members of a general court-martial, nor except in the cases herein expressly mentioned; nor shall more than fifty lashes be inflicted on any offender, at the discretion of a court-martial; and no officer, non-commissioned officer, soldier, or follower of the army, shall be tried a second time for the same offence.

Art. 88. No person shall be liable to be tried and punished by a general court-martial for any offence which shall appear to have been committed more than two years before the issuing of the order for such trial, unless the person, by reason of having absented himself or some other manifest impediment, shall not have been amenable to justice within that period.

Art. 89. Every officer authorised to order a general court-martial, shall have power to pardon or mitigate any punishment ordered by such court, except the sentence of death, or of cashiering an officer; which, in the cases where he has authority (by article 65) to carry them into execution, he may suspend, until the pleasure of the president of the United States can be known; which suspension, together with copies of the proceedings of the court-martial, the said officer shall immediately transmit to the president, for his determination. And the colonel or commanding officer of the regiment or garrison, where any regimental or garrison court-martial shall be held, may pardon or mitigate any punishment ordered by such court to be inflicted.

Art. 90. Every judge advocate, or person officiating as such, at any general court-martial, shall transmit, with as much expedition as the opportunity of time and distance of place can admit, the original proceedings and sentence of such court-martial, to the secretary of war, which said original proceedings and sentence shall be carefully kept and preserved in the office of said secretary, to the end that the persons entitled thereto may be enabled, upon application to the said office, to obtain copies thereof.

The party tried by any general court-martial shall, upon demand thereof made by himself or by any person or persons in his behalf, be entitled to a copy of the sentence and proceedings of such court-martial.

Art. 91. In cases where the general or commanding officer may order a court of inquiry to examine into the nature of any transaction, accusation, or imputation against any officer or soldier, the said court shall consist of one or more officers, not exceeding three, and a judge advocate, or other suitable person as a recorder, to reduce the proceedings and evidence to writing, all of whom shall be sworn to the faithful performance of their duty. This court shall have the same power to summon witnesses as a court-martial, and to examine them on oath. But they shall not give their opinion on the merits of the case, excepting they shall be thereto specially required. The parties accused shall also be permitted to cross examine and interrogate the witnesses, so as to investigate fully the circumstances in question.

Art. 92. The proceedings of a court of inquiry must be authenticated by the signature of the recorder and the president, and delivered to the commanding officer: and the said proceedings may be admitted as evidence by a court-martial, in cases not capital, or extending to the dismission of an officer, provided that the circumstances are such, that oral testimony cannot be obtained. But as courts of inquiry may be perverted to dishonorable purposes, and may be considered as engines of destruction to military merit, in the hands of weak and envious commandants, they are hereby prohibited, unless directed by the president of the United States, or demanded by the accused.

Art. 93. The judge advocate, or recorder, shall administer to the members the following oath:

"You shall well and truly examine and inquire, according to your evidence, into the matter now before you, without partiality, favor, affection, prejudice, or hope of reward. So help you God."

After which the president shall administer to the judge advocate, or recorder, the following oath:

"You, A. B. do swear that you will, according to your best abilities, accurately and impartially record the proceedings of the court, and the evidence to be given in the case in hearing. So help you God."

The witnesses shall take the same oath as witnesses sworn before a court-martial.

Art. 94. When any commissioned officer shall die or be killed in the service of the United States, the major of the regiment, or the officer doing the major's duty in his absence, or in any post or garrison, the second officer in command, or the assistant military agent, shall immediately secure all his effects or equipage, then in camp or quarters, and shall make an inventory thereof, and forthwith transmit the same to the office of the department of war, to the end that his executors or administrators may receive the same.

Art. 95. When any non-commissioned officer, or soldier, shall die, or be killed in the service of the United States, the then commanding officer of the troop, or company, shall, in the presence of two other commissioned officers, take an account of what effects he died possessed of, above his arms and accoutrements, and transmit the same to the office of the department of war; which said effects are to be accounted for, and paid to the representatives of such deceased non-commissioned officer or soldier. And in case any of the officers, so authorised to take care of the effects of deceased officers and soldiers, should, before they have accounted to their representatives for the same, have occasion to leave the regiment, or post, by preferment, or otherwise, they shall, before they be permitted to quit the same, deposit in the hands of the commanding officer, or of the assistant military agent, all the effects of such deceased non-commissioned officers and soldiers, in order that the same may be secured for, and paid to, their respective representatives.

Art. 96. All officers, conductors, gunners, matrosses, drivers, or other persons whatsoever, receiving pay, or hire, in the service of the artillery, or corps of engineers of the United States, shall be governed by the aforesaid rules and articles, and shall be subject to be tried by courts-martial, in like manner with the officers and soldiers of the other troops in the service of the United States.

Art. 97. The officers and soldiers of any troops, whether militia or others, being mustered and in pay of the U States, shall, at all times, and in all places, when joined, or acting in conjunction with the regular forces of the U. States, be governed by these rules and articles of war, and shall be subject to be tried by courts-martial, in like manner with the officers and soldiers in the regular forces, save only, that such courts-martial shall be composed entirely of militia officers.

Art. 98. All officers, serving by commission from the authority of any particular state, shall on all detachments, courts-martial, or other duty, wherein they may be employed in conjunction with the regular forces of the U. States, take rank, next after all officers of the like grade in said regular forces, notwithstanding the commissions of such militia or state officers may be elder than the commissions of the officers of the regular forces of the U. States.

Art. 99. All crimes not capital, and all disorders and neglects which officers and soldiers may be guilty of, to the prejudice of good order and military discipline, though not mentioned in the foregoing articles of war, are to be taken cognizance of by a general or regimental court-martial, according to the nature and degree of the offence, and be punished at their discretion.

Art. 100. The president of the United States, shall have power to prescribe the uniform of the army.

Art. 101. The foregoing articles are to be read and published once in every six months, to every garrison, regiment, troop or company, mustered or to be mustered in the service of the U. States, and are to be duly observed and obeyed, by all officers and soldiers who are or shall be in said service.

Sect. II. *And be it further enacted*, That in time of war, all persons not citizens of, or owing allegiance to the U. States of America, who shall be found lurking as spies, in or about the fortifications or encampments of the armies of the U. States, or any of them, shall suffer death, according to the law and usage of nations, by sentence of a general court-martial.

Sect. III. *And be it further enacted*, That the rules and regulations, by which the armies of the U. States have heretofore been governed, and the resolves of Congress thereunto annexed, and respecting the same, shall, henceforth be void and of no effect, except so far as may relate to any transactions under them, prior to the promulgation of this act, at the several posts and garrisons respectively, occupied by any part of the army of the U. States. *April* 10, 1806.

Council of War, is an assembly of great officers called by a general, or commander, to deliberate with him on enterprizes and attempts to be made. On some occasions, council of war is also understood of an assembly of officers, sitting in judgment on delinquent soldiers, deserters, coward officers, &c.

War. This word is frequently prefixed or attached to things or persons, in order to distinguish their particular state or functions, viz.

War *establishment*. See Establishment.

War *minister*. See Secretary.

Secretary at War. An efficient character at the head of the war office, with whom all matters belonging to the army rest. See Office.

War-*Cry*, was formerly customary in the armies of most nations, when they were just upon the point of engaging. Sometimes it consisted of tumultuous shouts, or horrid yells, uttered with an intent to strike terror into their adversaries; such as is now used by the Indians in America, called the *war-whoop*.

WARASDINS, a kind of Sclavonian soldiers, clothed like the Turks, with a sugar-loaf bonnet instead of a hat. Their arms are a fusee and pistols; the butt end of their fusee serves for a spade, when they have occasion to throw up earth.

To WARD. To guard; to watch; to defend; to parry any attack.

WARD. Watch; the act of guarding. A garrison or party stationed for defence of any place; a position of defence, or guard made by a weapon in fencing. That part of a lock, which, corresponding to the proper key, hinders any other from opening it. A district of a town; division of a building, &c. It is also used to denote one under the care and subject to the control of a guardian.

WARDEN. A keeper; a head officer.

Warden, *or lord Warden of the Cinque ports*. A magistrate that has the jurisdiction of those havens in the east part of England, commonly called the cinque ports, or five havens, where he is invested with all that jurisdiction which the admiral of England has in places not exempt. According to Cowel, from whom this explanation is taken, the reason why one should be assigned to these ns to be, because, in respect to their situation, they formerly required a more vigilant care than other havens, being in greater danger of invasion. On this account the lord chief warden of the cinque should be an officer of some experience, well skilled in the art of defence, and equal to the superintendance of so important a range of coast, upon which France had cast a jealous eye from time immemorial, and where Cæsar made a successful landing. It is, however, little more than a sinecure situation, and a snug retreat for ex-ministers.

By act the 26th of Geo. III. it has been enacted, that the warden of the cinque ports, two ancient towns, and their members, and in his absence his lieutenant or lieutenants, may put in execution, within the said ports, towns and members, all the powers and authorities given and granted by this act, in like manner as lieutenants of counties and their deputy lieutenants, may do, and shall keep up and continue the usual number of soldiers in the said ports, towns and members, unless he or they find cause to lessen the same. The militia of the ports is, according to this act, to remain separate from the militia of the counties, and may be called out, pursuant to an act passed in the 13th and 14th years of king Charles the Second, notwithstanding the pay advanced may not have been reimbursed.

WARDER. A guard; a truncheon by which an officer at arms forbade fight.

WARFARE. Military service, state of war.

To Warfare. To lead a military life.

WARHABLE, } Military; fit for
WARLIKE, } war.

Warlike *virtues*, are, love of our country, courage, valor, prudence, intrepidity, temperance, disinterestedness, obedience, wisdom, vigilance, and patience. In the last celebration of the anniversary of the destruction of the Bastille, which took place at Paris on the 14th of July, 1789, the French characterized these eleven virtues by the following emblems:—a pelican, a lion, a horse, a stag, a wolf, an elephant, a dog, a yoked ox, an owl, a cock, and a camel.

WARNED. Admonished of some duty to be performed at a given time or place. Thus officers and soldiers are warned for guard, &c.

WARRANT. A writ of authority inferior to a commission: thus quarter-masters are warrant officers.

To WARRAY. To make war upon any state or body of men. An obsolete word.

WARREN. A kind of park for rabbits.

Warren, at Woolwich, England, so called from the spot having formerly been stocked with rabbits. It now comprehends the head-quarters for the royal artillery, the royal foundery, the royal laboratory, and royal military academy; also famous for proofs and experiments of artillery, and great apparatus of war.

WARRIOR. A soldier; one who fights in war.

WAR-*Whoop*. A signal of attack among the Indians. See Whoop.

WARWOLF. In ancient military history, an engine for throwing stones and other great masses.

WAR-WORN. Wornout in the service.

WASELAAT, *Ind.* Collections made.

WASEL *Baky*, Ind. Collections made, and balances struck.

WASHER. A flat circular ring put on the axle-tree, between the linch-pin and small end of the nave, to prevent the nave rubbing against the linch-pin and wearing it, as likewise to diminish the friction of the nave.

WASSYOUT *Nama*, Ind. A will or last testament.

To WATCH. To keep guard; to be attentive and vigilant; to observe the conduct of any one.

Watch. A duty performed on board of ship. It likewise means the person who performs that duty.

Serjeant of the Watch. A non-commissioned officer belonging to the marines or other troops on board, who does duty for a stated period. At sea, the term watch denotes a measure or space of four hours, because half the ship's company watch and do duty in their turns, so long at a time: and they are called the starboard watch and larboard watch.

The following instructions have been published respecting the watch duty which is to be done by troops embarked in transports, &c.

At eight o'clock in the evening, every man is to be in his birth, except the men on watch: the officer of the watch to go round with a lanthorn, to see that the above has been complied with.

The whole to be divided into three watches, both subaltern officers and men; the watch gives all the sentries, &c. &c.

A captain of the day to be appointed, to whom the subaltern of the watch will make his reports; and the captain to the commanding officer; if there be a superior officer on board.

The whole watch to be always on deck, except when rain obliges them to go down for shelter; and, in fine weather, every man should be upon deck the whole day.

WATCHMAN. A centinel, one set to keep guard.

WATCHTOWER. A tower on which a centinel was posted to keep guard against an enemy.

WATERING-*Call*. A trumpet sounding, on which the cavalry assemble to water their horses.

WATER-*Rocket*. A kind of firework made to burn in the water.

WATERING-*Cap*. A cap, made of leather or cloth, which dragoons wear when they water their horses or do stable-duty.

Watering-*Jacket*. A waistcoat with sleeves, which dragoons wear on the above occasions.

WATREGANS, *Fr*. This word is pronounced *outregans*, there being no W in the French alphabet. It is a Flemish term which is generally used in France, and signifies a ditch full of water, that has been made for the purpose of separating lands and inheritances. These ditches are sometimes large enough to receive small boats or barges, and run through a whole village.

WATTLE. A hurdle made by entwining twigs together.

WAY. A military road among the Romans and Saxons.

Way *of the rounds*, in fortification, is a space left for the passage of the rounds, between the rampart and the wall of a fortified town. This is not much in use at present. See Berme.

To WAYLAY. To beset by ambush.

WAYWODE, *Ind.* A prince; a chieftain.

WEAPON. An instrument of offence.

WEAPONED. Armed; furnished with arms of offence.

WEAPONLESS. Unarmed; having no weapon.

WEAR. A sluice-gate, or dam to shut up the water.

WEDGE. See Coins, Mechanic Powers, &c.

WEDGE. In a work translated from the French, and which is entitled, Observations on the Military Art, we find the following description of this instrument. It is composed of five surfaces, two of which are triangular, two long squared, and the fifth arbitrary. The two oblong surfaces, by their inclination to each other, form the point that insinuates itself into the wood, &c. that is to be split, as well as the sides or triangular surfaces, if the triangle, as it is driven, lengthens the slit or opening. They are the square surfaces that first insinuate themselves into the body to be cleft; and what are called triangular surfaces, are only what fill the space that separates the two quadrangular sides. After this reflection it appears, that the column has, at least, as just a claim as the triangle, to the term or word wedge. We may even say, with confidence, it has a much better; for a triangle of men ranged according to the same proportion as the triangle of the mechanic wedge, would be of very little force; and a mechanic wedge, of which the incisive angle was as great as that of a triangle of men, would be too large to enter those bodies we should want to cleave or split.

The double phalanx amphistome, of which Epaminondas formed the wedge, contained 3000 men, who were ranged, in Bouchaud's opinion, one hundred in front, and 30 deep. This opinion, according to some is erroneous. Among the different evolutions of the ancients, the wedge was frequently resorted to, and was in some degree connected with the lozenge, which is a figure in geometry composed of four sides and four angles: of the four angles two are always obtuse, and two acute. The angles, that are alike, are always opposed one to the other, and always in the same number of degrees. According to Ælian, there are many ways of ranging squadrons in a lozenge: in the first, they have ranks and files; in the second, neither; in the third, they have files, but no ranks; lastly, in the fourth, they have ranks alone without files. With regard to the wedge, it was a formation which the ancients adopted both in cavalry and infantry evolutions, and was variously used, viz:—

The WEDGE *of Cavalry*. This figure was formed on the same principles and movements as the lozenge, as far as the greatest rank of the latter, which served as a base to the triangular wedge. It was therefore as the half of a lozenge, cut and divided at its obtuse angles.

The Triangular WEDGE *of Infantry*.—Some people pretend, that there were two sorts of triangular wedges in use among the ancients. The first was full, and formed after the same manner as the lozenge, and the wedge of the cavalry. The second was open at the base, and ranged differently from that of the first.

Triangular WEDGE *with a full centre*. The Greek soldier occupied, at all times, a square space greater or less in proportion to the requisite order, either at a review, advancing towards the enemy, or standing in a position to receive him. This wedge was formed according to the arithmetical progression ÷ 1, 3, 5, 7, &c.

The open WEDGE. This species of wedge was formed two different ways, with the Greeks and Romans. Bouchaud de Bussy, who takes them, one from *Ælian*, whom he translates, and the other from *Vegetius*, gives us a third, which appears to be of his own invention, and is very much superior to the other two. According to Ælian, Epaminondas the Theban general employed the open wedge at the battle of Leuctra, and overthrew the Lacedemonians, whose army was much superior to the one he commanded. To form this wedge, the two divisions of a double phalanx amphistome, are to unite together at the head, being separate or open at the tail or rear; which gives them a near resemblance of the Greek letter Λ. Bouchaud de Bussy formed the wedge in the following manner:

"The same body of troops being in array, may likewise, says he, form the wedge in marching forward, and this manœuvre requires no preliminary movement. The three divisions being marked, well as the three files of the centre which compose the head of the wedge, the following words of command are given. *Marked divisions, prepare to form the wedge in advancing: march.* At the first notice, the files and ranks close suddenly; at the second, the three files of the centre, which will be the two first left files of the division on the right, and the first right file in the division on the left, march straight forward; at their second pace, the first file, that is contiguous to them on the right, and that which is equally contiguous on the left, move in their turn, so as to have their chiefs or leaders on a line, and in a rank, as it were, with the second soldiers of the three files of the centre; at the second pace of the files, who have made the second motion, the files that touch them march immediately likewise, and the same manœuvre is to continue successively; each head of a file taking notice not to move, until the moment he finds himself on a line with the second man of the file contiguous, &c."

This method is beyond dispute the most simple, short, and secure that can be devised. The men occupy necessary and proper spaces, and if the enemy's resistance should stop their head, the rest of the files, continuing their movements, would all arrive on the same front to engage together, that is, they would be in their primitive order of the phalanx. This author, to whose observations we refer from page 170 to page 203, thus concludes: we shall only remark, that all terms, metaphorically applied, sooner or later produce doubts and uncertainty. Neither a column or triangle of men should have ever been denominated a wedge; for a line of troops is not formed to be split like a piece of timber; it may be opened, broken through, or divided into as many parts as possible.

WEIGHTS, in military matters, are those in general use, except in artillery, where hundreds are made use of, each of 112lb. quarters, each of 28lb, and pounds, each of 16 ounces.

Every officer should know the weight of the ordinary musquet, rifle, carbine, and musquetoon; the weight of ball carried by each, for proof and service; the weight of powder according to quality required for each gun, and for practice and service, as well as the range of each weapon.

Artillery officers should know the weight of metal in iron and brass guns of every calibre: they should know the difference between the weight of metal in guns formerly and at present, and the reasons for the reduction of the weight of metal; they should know the length as well as weight of guns, and the weight of cannon ball, and the windage allowed for cannon shot; they should know the weight allowed for case, cannister, and grape shot; and the weight of powder in every case. They should know the weight of mortars of every dimension, and of the shells which they throw, and the powder necessary for every elevation and use.

The weight which horses and waggons can bear and draw on given kinds of roads. The burdens which boats, barges, and water craft can bear and carry on streams or rivers; and the expence of carriage by weight or measure in every situation. Military men should know the weight of men, horses, and every description of matter used or liable to be moved in service.

TABLE OF TROY-WEIGHT,

Shewing the quantity of grains Troy-Weight contained by each of the weights used in the trade of precious metals, and the relation of foreign weights to 100 pounds Troy-Weight.

Countries and Places.	Names of the Weights.	Contents of each weight — grains	Equiv. to 100 pounds — num.100
Amsterdam	marc	3798	151,66
Antwerp	marc	3798	151,66
Augsburgh	marc	3643	158,09
Basil	marc	3612	159,46
Berlin	marc	3616	159,30
Bern	marc	3813	151,06
Bombay	tola	178¼	3231,25
Bonn	marc	3609	159,62
Botzen	marc	4330	133,04
Bremen	marc	3612	159,46
Breslaw	marc	3016	199,99
Brunswick	marc	3603	159,85
Brussels	marc	3798	151,66
Cairo	rotolo	6887	83,64
China	tale	579	994,81
Cologne	marc	3612	159,46
Constantinople	cheky	4926	116,93
Copenhagen	marc	3641	158,19
Coromandel	seer	4293	134,16
Cracow	marc	3069	187,68
Damascus	rotolo	34432	16,73
Dantzic	marc	3605½	159,75
Dresden	marc	3605½	159,75
England	pound	5760	100,00
	ounce	480	1200,00
Florence	pound	5244	109,84
France	marc	3780	152,33
	kilogramme	15446	37,29
Francfort	marc	3612	159,46
Geneva	marc	3787½	152,07
Genoa	pound	4897⅔	117,61
Hamburgh	marc	3608	159,64
Hanover	marc	3608	159,64
Holland	marc	3798	151,66
Japan	tale	580⅛	992,02
Konigsberg	marc	3023	190,52
	idem Berlin weight	3616	159,30
Leghorn	pound	5244	109,84
Leipsic	marc	3606	159,75
Liege	marc	3800	151,58
Lubec	marc	3608	159,64
Magdeburg	marc	3607	159,68
Malabar	seer	4293	134,16
Manheim	marc	3611	159,49
Milan	marc	3631	158,63
Munich	marc	3612	159,46
Naples	pound	4954	116,27
Nuremberg	marc	3688	156,19
Pegu	tical	237½	2427,8
Persia	mitigal	71½	8027
Pisa	pound	5237	11
Pondicherry	seer	4293	[illegible]
Portugal	marc	3542½	
Prague	marc	3916	
Ratisbon	marc	3800	
Riga	marc	[illegible]	

TROY-WEIGHT.

Countries and Places.	Names of the Weights.	Contents of each weight — Grains	Equiv. to 100 pounds — num. 100
Rome	pound	5239	109,95
Russia	pound	6314	91,23
Sienna	pound	5179	111,22
Spain	marc	3551	162,21
Sweden	marc	3252	177,12
Surat	tola	187½	3066,35
Tripoli	mitical	73¾	7810,16
Tunis	ounce	486½	1183,96
Turin	marc	3799	151,62
Venice	marc	3686	156,26
	ounce	460¾	1250,12
Vienna	marc	4333	132,93
Warsaw	marc	3114	184,97
Wilna	marc	3006	191,62
Wirtemburg	marc	3612	159,46
Zurich	marc	3615	159,34

The following examples will shew in what manner the proportion between the weights of any two given countries may be ascertained.

Examples.

It is required to reduce 100 marcs of Hamburgh into marcs of France.

The marc of Hamburgh weighing 3608 grains, and the marc of France 3780, according to the table prefixed, state the following equation:

100 marcs of Hamb. = x
1 marc of Hamb. = 3608 grains
3780 grains = 1 marc of France
Result 95,45 marcs of France.

Reduce 100 marcs of France into marcs of Hamburgh.

100 marcs of France = x
1 marc of France = 3780 grains
3608 grains = 1 marc of Hamb.
Result 104,76 marcs of Hamburgh.

TABLE OF AVOIRDUPOIS-WEIGHT,

Shewing the quantity of grains Troy-weight contained by each of the weights used in the sale of merchandize, and the relation of foreign weights to 100 pounds and 112 pounds Avoirdupois-weight.

Countries and Places.	Names of the Weights.	Contents of each weight — Grains	Equiv. to 100 pounds — num. 100	Equiv. to 112 pounds — num. 100
Achem	catti	14675	47,70	53,42
Aix in France	pound	6310	110,94	124,25
Aix la Chapelle	pound	7235	96,75	108,26
Algiers	rotolo	8345	83,89	93,95
Aleppo	idem of 720 drams	35190	19,89	22,28
	idem of 700	34213	20,46	22,92
	idem of 680	33235	21,06	23,59
	idem of 600	29315	23,87	26,73
	idem of 400	19550	35,81	40,10
Alexandria	rotolo zauro	14579	48,01	54,77
	idem zaidino	9346	74,90	83,89
	idem forforo	6579	106,40	119,16
Alexandretta	mine	11663	60,02	67,22
Alicante	libra mayor	8004	87,45	97,95
	libra menor	5336	131,18	146,93
Altona	pound	7477	93,62	104,86
Amberg	pound	9257	75,62	84,70
Amsterdam	pound commercial weight	7625	91,80	102,82
	pound apothecary weight	5696	122,88	137,63
Ancona	pound	5183	135,05	151,26
Anspach	pound	7868	88,97	99,64
Antwerp	pound	7261	96,40	107,97
Archangel	pound	6314	110,87	124,18
Arragon	libra pensil	5326	131,43	147,20
Augsburgh	pfund frohngewicht	7580	92,34	103,42
	pfund kramgewicht	7295	95,95	107,46
Avignon	pound	6084	115,05	128,85
Bamberg	pound	7494	93,41	104,62

AVOIRDUPOIS-WEIGHT.

Countries and Places.	Names of the Weights.	Contents of each weight — Grains.	Equiv. to 100 pounds — num. 100	Equiv. to 112 pounds — num. 100
Barcelona	pound	6214	112,65	126,16
Basil or Baslé	pound	7561	92,58	103,69
Batavia	catti	9450	74,08	82,96
Bautzen	pound	6690	104,63	117,18
Bayonne	livre	7561	92,58	103,69
Bayreuth	pound	7989	87,63	98,14
Beetlefakee	maund	11773	59.46	66,59
Bengal	factory maund		1,34	1,50
	bazar maund		1,22	1,36
Bergamo	pound peso forte	12581	55,64	62,31
	pound light weight	5033	139,09	155.78
Bergen	pound	7716	90,72	101,60
Bergen op Zoom	pound	7343	95,33	106,77
Berlin	pound	7233	96,78	108,40
Bern	pound	8068	86.76	97,18
Bilboa	pound	7561	92,58	103,69
Bois-le-Duc	pound	7196	97,27	108,95
Bologna	pound	5590	125,21	140,24
Bolzano	pound	7733	90,52	101,38
Bombay	maund		2,63	2,95
Bordeaux	pound city weight	7637	91,66	102,66
	pound poids de mare	7561	92,58	103,69
Bremen	pound	7700	90,92	101,83
Breslaw	pound	6256	111,90	125.33
Bruges	pound	7261	96,40	107,97
Brunswick	pound	7207	97,13	108,79
Brussels	pound	7261	96,40	107,97
Bussorah	maund seffi		1,11	1,24
	maund a tara		3.51	3.93
Cadiz	pound	7102	98,57	110,40
Cairo	rotolo	6665	105,04	117,64
Calais	pound heavy weight	7870	88,95	99,62
	pound light weight	6501	107,67	120,59
Calicut	maund		3.33	3.73
Canary Islands	pound	7094	98,67	110,52
Canea	rotolo heavy weight	8127	86,13	96.47
	rotolo light weight	5277	132,64	148,56
Canton	catti	8640	81,	90,72
Carthagena	pound	7102	98,57	110,40
Cassel	pound	4887	143.23	160,42
Castille	pound	7102	98,57	110,40
Cephalonia	pound	7384	94,80	106,18
Chambery	pound	6621	105,72	118,40
Civita Vecchia	pound	5267	132,90	148,85
Coburg	pound	7868	88,97	99,64
Cologne	pound	7225	96,89	108,52
Como	pound	4789	146,18	163.72
Constance	pound	7285	96,08	107,61
Constantinople	rotolo	8670	80,74	90,43
Copenhagen	pound	7716	90,72	101,60
Corfu	pound	7384	94,80	106,18
Coromandel	vis	23333	30,	33.59
Corsica	pound	5315	131,70	147.50
Corunna	pound	8877	78,85	88,31
Courtray	pound	6749	103.58	116,
Cracow	pound	6271	111,63	125,02
Cremona	pound	5060	138,34	154,94
Culmbach	pound	7989	87,63	98,14
Cyprus	rotolo	36710	19,07	21,36
Damascus	rotolo	27691	25,28	28,31
Dantzic	pound	6722	104,15	116,66
Denmark	pound	7716	9072	101,60
Delft	pound	7625	91,80	102,82
Deventer	pound	7259	96,42	108,

AVOIRDUPOIS-WEIGHT.

Countries and Places.	Names of the Weights.	Contents of each weight — Grains	Equiv. to 100 pounds — num.100	Equiv. to 112 pounds — num.100
Dieppe	pound	7630	91,75	102,76
Dixmude	pound	6639	105,43	118 09
Dordrecht	pound	7625	91,80	102,82
Dresden	pound	7211	97,07	108,72
Dublin	pound	7000	100,	112,
Dunkirk	pound	6615	105,81	118,52
Elbing	pound	6558	106,74	119,55
Elsinore	pound	7716	90,72	101,60
Embden	pound	7666	91,31	102,27
England	pound avoirdupois	7000	100,	112,
	pound apothecary weight	5760	121,53	136,11
Erfurt	pound	7285	96,08	107,61
Ferrara	pound	5237	133,67	149,71
Ferrol	pound	8877	78,85	88,31
Fez	rotolo	7259	96,42	108,
Flensburg	pound	7461	93,82	105,08
Florence	pound	5401	129,60	145,15
Forli	pound	5084	137,69	154,22
France	pound poids de marc	7561	92,58	103,69
	pound apothecary weight	5568	123,51	138,33
	kilogramme	15446*	45,32	50,76
	hectogramme	$1544\frac{3}{5}$	453,20	507,60
Francfort on the Maine	pound heavy weight	7841	89,28	100,
	pound light weight	7210	97,09	108,74
Francfort on the Oder	pound	7232	96,80	108,42
Freyberg	pound	7210	97,09	108,74
Flushing	pound	7189	97,37	109,06
Gaeta	pound	4553	153,75	172,20
Galicia	pound	8877	78,85	88,31
Gallipoli	rotolo	6978	100,31	112,35
Gand	pound	7261	96,40	107,97
Geneva	pound heavy weight	8502	82,34	92,22
	pound light weight	7085	98,70	110,66
Genoa	Custom-House rotolo	8258	84,77	94,94
	rotolo peso dicassa	7506	93,25	104,45
	rotolo cantaro weight	7360	95,11	106,52
	pound peso grosso	4907	142,65	159,77
	pound peso sottile	4898	142,92	160,07
Germany	pound apothecary weight	5527	126,64	141,84
Gibraltar	pound	7215	97,01	108,55
	pound Cadiz weight	7102	98,57	110,40
Gottenburg	pound victualie weight	6563	106,66	119,46
	pound for weighing iron	5250	133,33	149,33
Grenada	pound heavy weight	7707	90,82	101,72
	pound light weight	6860	102,05	114,30
Groningen	pound	7552	92,69	103,81
Gueldres	pound	7205	97,15	108,81
Hamburg	pound commercial weight	7481	93,57	104,80
	pound Cologne weight	7224	96,89	108,52
Hanover	pound	7494	93,40	104,61
Harburg	pound	7494	93,40	104,61
Harlem	pound	7625	91,80	102,82
Havre de Grace	pound	8161	85,77	96,06
Hague	pound	7625	91,80	102,82
Heidelberg	pound	7788	89,88	100,67
Hildesheim	pound	7207	97,13	108,79
Japan	catti	9100	76,92	86,15
Java	catti	9247	75,70	84,79
Kiel	pound	7355	95,17	106,69

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* The gramme, or the unit of French weights, is therefore equivalent to 15,446 ns troy-weight.

Countries and Places.	Names of the Weights.	Contents of each weight — Grains.	Equiv. to 100 pounds — num.100	Equiv. to 112 pounds — num.100
Kintzingen	pound	7868	88,97	99,64
Konigsberg	pound old weight	5869	119,27	133,58
	pound new weight	7233	96,78	108,50
Krems	pound	8743	80,37	89,67
Leghorn	pound	5296	132,17	148,03*
Leipsic	pound butchers' weight	7772	90,07	100,88
	pound commercial weight	7207	97,13	108,79
	pound miners' weight	6954	100,66	112,75
	pound for weighing steel	6718	104,20	116,70
Leyden	pound	7261	96,40	107,97
Liebau	pound	6378	109,76	122,92
Liege	pound	7331	95,48	106,94
Lindau	pound	7089	98,74	110,59
Lintz	pound	8743	80,07	89,67
Lisbon	pound	7085	98,80	110,66
Lisle	pound heavy weight	7164	97,72	109,44
	pound light weight	6615	105,81	118,52
London	pound avoirdupois	7000	100,	112,
Louvain	pound	7261	96,40	107,97
Lubec	pound	7461	93,86	105,08
Lucca	pound commercial weight	5745	121,84	136,45
	pound for weighing silk	5150	135,93	152,24
Lucern	pound	7707	90,82	101,72
Lunenburg	pound	7494	93,40	104,61
Lyons	pound for weighing silk	7088	98,77	110,62
	pound city weight	6615	105,81	118,52
Madeira	pound	6725	104,10	116,59
Madras	maund		4,	4,48
Madrid	pound	7102	98,57	110,40
Magdeburg	pound	7232	96,80	108,42
Mahon	pound	6865	101,97	114,21
Majorca	rotolo	6486	107,92	120,87
Malabar	vis	23333	30,	33,59
Malacca	vis	9450	74,08	82,96
Malaga	pound	7102	98,57	110,40
Malta	rotolo	11901	58,82	65,88
Manheim	pound	7639	91,63	102,63
Mantua	pound	5083	137,71	154,24
Marseilles	pound poids de table	6203	112,85	126,39
Masulipatam	seer	4293	163,05	182,62
Mecca	rotolo	7144	97,98	109,74
Medina	rotolo	7144	97,98	109,74
Memel	pound	6378	109,76	122,92
Memmingen	pound	7903	88,57	99,20
Messina	pound of twelve ounces	4903	142,77	175,34
	rotolo of thirty ounces	12257	57,11	63,96
	rotolo of thirty-three ounces	13483	51,92	58,15
Middleburg	pound	7225	96,89	108,52
Milan	pound heavy weight	11807	59,29	66,40
	pound light weight	5060	138,34	154,94
Minorca	libra mayor	18480	37,88	42,43
	libra menor	6160	113,65	127,28
Mocha	maund	21000	33,33	37,33
Modena	pound	4971	140,82	157,71
Monaco	pound	5113	136,89	153,32
Montpellier	pound	6282	111,42	124,89
Morea	pound commercial weight	6168	113,49	127,19
	pound for weighing silk	7710	90,79	101,68
	oke	18463	37,92	42,47
Morocco	pound of Castille	7102	98,57	110,40
Morlaix	pound	7561	92,58	103,69

* According to the prices current received from Leghorn, the equivalent to 11 pounds is only 145.

AVOIRDUPOIS-WEIGHT.

Countries and Places.	Names of the Weights.	Contents of each weight — Grains.	Equiv. to 100 pounds — num 100	Equiv. to 112 pounds — num. 100
Muscovy	pound	6314	110,87	124,18
Munich	pound	8657	80,86	90,57
Munster	pound	7355	95,17	106,60
Namur	pound	7261	96,40	107,97
Nancy	pound	7561	92,58	103,69
Nantes	pound	7561	92,58	103,69
Naples	pound	4954	141,30	158,26
	rotolo	13761	50,87	56,97
Narva	pound	7225	96,89	108,52
Navarre	pound of Castille	7102	98,57	110,40
Naumburg	pound	7207	97,13	108,79
Negroponti	rotolo	8261	84,73	94,90
Neufchatel	pound	8029	87,18	97,64
Neustadt	pound	7868	88,97	99,64
Nice	pound	4786	146,25	163,80
Nimeguen	pound	7639	91,63	102,63
Nordlingen	pound	7566	92,52	103,62
Norway	pound	7716	90,72	101,60
Novi	pound	5113	136,89	153,32
Nuremberg	pound	7868	88,97	99,64
Oporto	pound Lisbon weight	7085	98,80	110,66
	pound according to Kruse	6646	105,33	117,97
Oran	rotolo	7776	90,02	100,83
Orient	pound	7561	92,58	103,69
Ormus	seer	4676	149,70	167,67
Osnaburg	pound	7625	91,80	102,82
Ostend	pound	7261	96,40	107,97
Oudenard	pound	6758	103,58	116,
Oviedo	pound of Asturias	10653	65,71	73,60
	pound of Castille	7102	98,57	110,40
Paderborn	pound	7355	95,17	106,60
Padua	pound	5157	135,75	152,04
Palermo	pound of 12 ounces	4903	142,77	175,34
	rotolo of 30 ounces	12257	57,11	63,96
	rotolo of 33 ounces	13483	51,92	58,15
Paris	pound poids de marc	7561	92,58	103,69
Parma	pound	5234	133,75	149,80
Passau	pound	7414	94,41	105,74
Patras	pound commercial weight	6168	113,49	127,10
	pound for weighing silk	7710	90,79	101,68
Pegu	vis	23333	30,	33,59
Pernau	pound	6431	108,85	121,91
Piedmont	pound	5749	121,77	136,39
Pisa	pound	5028	139,21	155,92
Placenza	pound	4980	140,56	157,43
Pondicherry	vis	22683	30,86	34,56
Portugal	pound	7085	98,80	110,66
Posen	pound	6158	113,87	127,53
Prague	pound	7929	88,28	98,88
Presburg	pound	8616	81,24	91,
Ragusa	pound	5607	124,84	139,82
Ratisbon	pound	8777	79,75	89,32
Ravenna	pound	4623	151,41	169,58
Reggio	pound	5093	137,45	153,95
Revel	pound	6646	105,33	117,97
Rhodes	rotolo	36922	18,96	21,24
Riga	pound	6454	108,40	121,48
Rochelle	pound	7561	92,58	103,69
Rome	pound Roman	5239	133,61	149,65
	pound public scale	5344	131,	146,71
Rostock	pound	7888	88,75	99,40
Rotenburg	pound	7868	88,97	99,64
Rotterdam	pound heavy weight	7625	91,80	102,82
	pound light weight	7261	96,40	107,97

Countries and Places.	Names of the Weigl
Rouen	pound poids de marc
	pound poids de vicom
Roveredo	pound
Russia	pound
St. Ander	pound
St. Croix	pound
St. Eustatia	pound
St. Gall	pound heavy weight
	pound light weight
St. Lucar	pound
St. Malo	pound
St. Petersburg	pound
St. Sebastian	pound
Sallee	pound
Saltzburg	pound
Saragossa	pound of 12 ounces
Sardinia	pound
Sayd	rotolo of Acre
	rotolo of Damascus
Schafhausen	pound
Schweinfurt	pound
Scio	rotolo
Scotland	pound old weight
	pound new weight
Seville	pound
Siam	catti
Sicily	pound of 12 ounces
	rotolo of 30 ounces
	rotolo of 33 ounces
Sienna	pound
Smyrna	oke
	rotolo
Spain	pound of 16 ounces
Stade	pound
Stettin	pound
Stralsund	pound
Strasburg	pound heavy weight
	pound light weight
Sweden	pound victualie weight
	pound miners' weight
	pound cities weight
	pound for weighing iro
	pound apothecary weig
Sumatra	catti
Surat	seer
Surinam	pound
Syracuse	pound
Syria	mina
Tangier	rotolo
Teneriffe	pound of Castille
Tetuan	rotolo
Thorn	pound
Toulon	pound
Toulouse	pound
Tournai	pound
Treves	pound heavy weight
	pound light weight
Trieste	pound Vienna weight
	pound Venice great weig
	pound Venice small wei
Tripoli in Barbary	rotolo
Tripoli in Syria	rotolo
	oke
Tunis	rotolo

AVOIRDUPOIS-WEIGHT.

Countries and Places.	Names of the Weights.	Contents of each weight — Grains.	Equiv. to 100 pounds — num. 100	Equiv. to 112 pounds — num. 100
Turin	pound	5696	122,89	137,63
Valencia	pound of 12 oz.	5498	127,32	142,60
	pound of 16 oz.	7331	95,48	106,94
	pound of 18 oz.	8247	84,88	95,07
Valenciennes	pound	7259	96,43	108,
Venice	pound great weight	7384	94,80	106,18
	pound small weight	4673	149,80	167,78
Verona	pound great weight	7677	91,18	102,12
	pound small weight	5136	136,30	152,65
Vicenza	pound great weight	7523	93,05	104,21
	pound small weight	5247	133,41	149,42
Vienna	pound	8650	80,92	90,64
Ulm	pound	7234	96,76	108,37
United States of America	pound	7000	100,	112,
Warsaw	pound	5853	119,60	133,95
Wismar	pound	7471	93,70	104,94
Windaw	pound	6377	109,76	122,23
Wirtemberg	pound	7225	96,89	108,52
Wurtzburg	pound	7362	95,08	106,49
Ypres	pound	6646	105,33	117,97
Zante	pound	7384	94,80	106,18
Zealand	pound	7172	97,60	109,32
Zell	pound	7494	93,40	104,61
Zittau	pound	7221	96,94	108,57
Zurich	pound heavy weight	8138	86,01	96,33
	pound light weight	7234	96,76	108,37
Zutphen	pound	7259	96,43	108,
Zwoll	pound	7439	94,10	105,39

The following examples will shew in what manner the proportion between the weights of any two given countries may be ascertained.

EXAMPLES.

It is required to reduce 100 kilogrammes of France into pounds of Amsterdam.

The kilogramme of France weighing 15446 grains, and the pound of Amsterdam 7625, according to the table prefixed, state the following equation:

100 kilogrammes = *x*
1 kilogramme = 15446 grains
7625 grains = 1 pound
Result 202,57 pounds.

Reduce 100 pounds of Amsterdam into kilogrammes of France.

100 pounds = *x*
1 pound = 7625 grains
15446 grains = 1 kilogramme
Result 49,37 kilogrammes.

WEIGHT, (*poids*, Fr.) Impression, pressure, burthen, overwhelming power. The great advantage which heavy cavalry has over the light horse, and particularly over infantry troops, consists wholly in its pressure and overwhelming power.

WELL. In the *military art*, a depth which the miner sinks under ground, with branches or galleries running out from it; either to prepare a mine, or to discover and disappoint the enemy's mine. See SHAFT.

To **WET.** In a sense of good fellowship and hilarity, and of course in a military one, to take a cheerful glass, or, speaking popularly, to "*moisten the clay.*"

To WET *a Commission.* It has always been customary in the army, for every officer, when he obtains a commission, gets promoted, or exchanged, to afford some mark and acknowlegement to the corps he joins.

WERE. The preterite of I am.

As you WERE. A word of command in the British service which corresponds with the French *remettez vous.* It signifies to return to the same position from which you had faced or wheeled, &c. and is generally used when any motion of the firelock or movement of the body has been done improperly.

WERST. A Russian measure in travelling. The Werst contains seven hundred and fifty geometrical paces.

WHEEL, in artillery. A circular body which turns round on its axis. The strength of these wheels is always, or should be, proportional to the weight they carry: the diameters of the wheels of heavy gun-carriages are 85 inches, and those for light field-pieces 52 only.

To WHEEL, (*Faire conversion*, Fr.)— In a military sense, to move forward or backward in a circular manner, round some given point. See PIVOT. Wheeling is one of the most essential and important operations of the squadron, necessary in many changes of position, and in the formation of column and of the line.

Wheel *of the squadron.* When the entire squadron is to wheel, a caution is given to that purport, and to which hand. At the word *March*, the front rank of the squadron remains dressed to the centre, the leader fixes his eye and makes his circle on the standing flank man; the standard follows him exactly, and the squadron wheels with the same uniform front, at such a pace as is requisite to keep every where dressed with the standard. The rear rank and the serrefiles look to the wheeling flank, and incline, at the same time that they wheel, so as always to cover their front leaders.

The standard must take care, never to oblige the wheeling man to exceed a moderate gallop, otherwise the rear rank, which has still more ground to go over, cannot keep up; the squadron will wheel loose and in disorder, and be longer in dressing than if it had come about at a slower pace, but close and connected.

The flanks must always conform to the centre, in case the leader does not take his ground as exactly as he ought. At any rate, the standard is the guide for the pace, and the point from which the distance of files is to be preserved.

The leader must take care to time his word *Dress* the instant before the wheel is completed, otherwise an over wheel or reining back will be the consequence.—The whole dress by the centre.

The squadron breaks into column of any of the divisions in which it is told off, by each of those divisions wheeling up the quarter circle. If the body is in motion (as in column) the wheels of the divisions all begin at the word *Wheel!* If halted, they are begun at the word *March!*

In all division wheelings, the whole look to the wheeling hand. In all wheelings, the rear rank must rein back at the standing flank, and incline towards the wheeling hand, in order to cover.

At the word *mark time! halt!* given when the wheel is completed, the whole turn eyes and dress to the standing flank, and remain so till a new direction is given.

Wheelings of the squadron, or its parts, from the halt, are made on the flanks, except those of ranks by threes, which are made on the middle man of each.

Wheel *of divisions into squadron.*—When the squadron is to be formed by the wheeling up of its divisions, there must not be any intervals, and the rear ranks must rein back, and incline so as not to interrupt the front ranks coming up together.

In division wheelings, the whole keep closed lightly towards the hand they wheel to, and must avoid pressing the pivot man off his ground. The outward man looks to his rank, he of course regulates the pace at which the wheel is made; he must not press in on his rank,

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When the change is made to the REVERSE hand, the pivot leader having arrived as before, at the spot where he gives his word *right or left quarter wheel!* for each man to give a small turn of his horse's head FROM the pivot hand, will begin in his own person to circle BEHIND the line from the old, so as to enter the new direction twenty or thirty yards from the point of intersection, which, in this case, he leaves at some small distance WITHOUT his pivot hand. The rest of his division, by giving way, having gradually conformed to his movement, he will at the proper instant order *Forward!* and resume a straight line.

During the change to either hand, the whole continue looking to the pivot flank, which never alters the rate of the then march; but the reverse flank is in the one case obliged to slacken, and in the other to quicken its movement.

In this manner, without the constraint of formal wheels, a column, when not confined on its flanks, may be conducted in all kinds of winding and changeable directions; for if the changes be made gradual, and circling, and that the pivot leadders pursue their proper path at the same uniform equal pace, the true distances of divisions will be preserved, which is the great regulating object on this occasion, and to which every other consideration must give way.

The wheelings of cavalry being more difficult than those of infantry, we have, on that account, been more particular; but the subject is handled more amply in the *American Military Library* The French do not make use of any word that immediately corresponds with *Wheel*, as a term of command. They say briefly, by platoons, &c. To the right or left into line, march. *Par pelotons, àdroite ou à gauche en bataille, marche.* The act of wheeling in general is expressed by quarter or half-quarter wheel.

WHEELINGS. Are different motions made by horse and foot, either to the right or left, or to the right and left about, &c. forward or backward.

WHEELING. The old aukward method of oblique moving and wheeling, is now superceded by *half* and *quarter* wheeling.

General rules for WHEELING. The circle is divided into four equal parts: thence, wheeling to the right or left, is only a quarter of the circle; wheeling to the right or left about, is one half of the circle.

When you wheel to the right, you are to close to the right, so near as to touch your right hand man, but without pressing him; and to look to the left, in order to bring the rank about even.

When you wheel to the left, you are to close to the left, and look to the right, as above directed. This rule will serve for all wheeling by ranks; as when a battalion is marching by subdivisions with their ranks open, then each rank wheels distinctly by itself, when it comes to the ground on which the ranks before it wheeled, but not before.

In wheeling, the men are to take particular care, neither to open nor close their ranks, and to carry their arms well.

In wheeling, the motion of each man is quicker or slower, according to the distance he is from the right or the left: thus, when you wheel to the right, each man moves quicker than his right-hand man; and, wheeling to the left, each man moves quicker than his left-hand man; the circle that every man wheels being larger, according to the distance he is from the hand he wheels to; as may be seen by describing several circles within one another, at two feet distance from each, which is nearly the space every man is supposed to take up.

WHEEL-*carriages*. In artillery, &c. The whole doctrine thereof, as it stands on a mathematical theory, may be reduced to the following particulars, viz.

1. WHEEL-*carriages* meet with less resistance than any other kind of carriage.

2. The larger the wheels, the easier is the draught of the carriage.

3. A carriage, upon four wheels of equal size, is drawn with less force than with two of those wheels, and two of a lesser size.

4. If the load be all on the axle of the larger wheels, it will be drawn with less force than if laid on the axis of the lesser wheels; contrary to the common notion of loading carriages before.

5. Carriages go with much less force on friction-wheels, than in the common way.

WHEELBARROW. A small carriage of burthen, pushed forward by the hands on one wheel; a certain number are always attached to the artillery.

WHINYARD. A sword, so called by Butler in his Hudibras.

WHIPCORD. A tight spun cord, with which the cat-o-nine-tails is made.

WHOLE. All, total, containing all.

Take care the WHOLE. A cautionary word which was formerly used in the British service, and is sometimes, but improperly, given now. The term *Attention* is adopted in its room.

WHOOP. A shout; a loud noise which soldiers make in charging, &c.— It is a natural though a barbarous habit, and has been preserved in civilized armies from a prevailing custom among savages, particularly the wild Indians of America.

WICKET, (*guichet*, Fr.) A small door in the gate of a fortified place, through which people go in and out, without opening the great gate.

WIDERZOUROUK. A compound word from the German, which signifies back again. The French pronounce it *Vuiderzourouk*. It means a movement which is made to the rear, in order to bring a squadron to the right about, in the same

French adopted this movement from the Germans, in the year 1670. He is of opinion, that previous to this epoch, squadrons were faced to the rear by means of a double caracol, describing a half-circle, the extent of whose front was equal to half of its diameter; on which account, the general order of battle in those days had considerable intervals, and great loss of time and space of course.

WIG. A Saxon termination of the names of men, signifying war.

WIGWAM. A hut used in America by the Indians.

WILBE, *Ind.* Guardian; protector.

WILDFIRE. A composition of firework, so called from its ready ignition and rapid combustion.

WINCH, (*Manivelle*, Fr.) The handle or lever by which a jack, windlass, &c. is turned.

WINDAGE *of a gun, mortar, or howitzer.* The difference between the diameter of the bore, and the diameter of the shot or shell. In England the diameter of the shot is supposed to be divided into 20 equal parts, and the diameter of the bore into 21 of those parts. The French divide the shot into 26, and the bore into 27.—The Prussians divide the shot into 24, and the bore into 25. The Dutch nearly the same as the English. The general windage of shells in England is ¼ of an inch, let them be large or small, which is contrary to all reason. It is evident, that the less windage a shot or shell has, the farther and truer it will go; and having less room to bounce from side to side, the gun will not be spoiled so soon.

It is true that some artillery officers say, that the windage of a gun should be equal to the thickness of the ladle; because, when it has been loaded for a while, the shot will not come out, without being loosened thereby, in order to unload it—and when this cannot be done, it must be fired away, and so lost: but the most advantageous windage should be in dividing the shot into 24 equal parts, and the bore into 25, on account of the convenient scale it affords, not only to construct guns thereby, but also their carriages. Hence, agreeable to this plan, the windage of a nine-pounder will be 166 of an inch, consequently a sufficient thickness for a ladle; and those of a higher calibre become still thicker in proportion: but suppose this thickness is not enough, the loss of a shot is a mere trifle, in respect to the advantage gained thereby.

WINDAGE. The usual windage of English guns is 1-20 of the calibre. It appears by experiments, that ¼, or nearly ½ of the force of the powder is lost by this windage. See VELOCITY.

Windage of Mortars and Howitzers.

From the 13 to 5½ inch the windage is ·15 of an inch, and that of the 4 2 5 is ·2 of an inch.

Windage of Guns and Carronades.

Kind	68	42	32	24	18	12	9	6	4	3
Guns	—	·33	·30	·27	·25	·22	·20	·17	·15	·14
Carrona.	·15	·15	·15	·14	·12	·12				

Windage of French Guns.

Field Guns.—All one line of windage; about 1-50 in an 8 pounder.

Siege Guns.—All 1½ line; about 1-48 in a 24 Pr.

Mortars.—12 inch; 4 lines of windage.
10 inch; 1 line, 5 points do.
8 inch; 1 line, do.

Howitzers.—All; 2 lines do.

WIND-GUN. See AIR-GUN.

WINDLASS, (*Vindas*, Fr.) Is a roller of wood, square at each end, through which are either cross holes for handspikes or staves across to turn it round: by this means it draws a cord, one end of which is fastened to some weight which it raises up. They are used in gins, and about Dutch mortars, to help to elevate them. The French say *Vindas ou Cabestan horizontal*, the latter being a sea term

WINDSAILS, (*Manches à vent*, F
Large pieces of canvas, which are use
ships at sea for the purposes of ver
tion, &c. During voyages in ho
mates, the most beneficial effects
rived from the use of windsail
master of the vessel should be d
have them made immediately as
embarked, if not already pro
they should be constantly
These sails throw a stream o
tween decks, and it is no
practice among the men,
the unexperienced soldie
bottom of them, by wh
purpose is defeated. T
watch must be respon
gularity is never com

To WINDWAR
As St. Domingo is
maica.

WINGS *of an*
in battle, are t
counting from t
tion is drawn

right and left of the centre are called the wings. The word wing is sometimes used to denote the large sides of horn-works, crown-works, tenailles, and other out-works, &c.

WINTER-*Quarters*. See QUARTERS.

WITHERBAND. A piece of iron laid under a saddle, about three inches above the withers of the horse, to keep tight the two pieces of wood.

WITNESSES. In fortification. See TEMOINS.

WITNESSES. In a military judicial sense, persons summoned by the judge-advocate, or any of his deputies, to attend at a general court-martial, there to speak to facts which they know of their own knowlege, and to which they can bona fide swear, from having been present at the transaction, &c. See *Macomb on Court-Martials*.

According to the articles of war, witnesses attending courts-martial are to be privileged from arrests, and not attending are liable to be attached.

WOHKEELE, *Ind.* An ambassador.

WOLF-*Holes*. In the defence of places, are round holes, generally about two or three feet in diameter at the top, one at bottom, and two and an half deep, dug in the front of any work. Sometimes a sharp-pointed stake or two are fixed at the bottom, and covered with very thin planks, and green sods; consequently the enemy, on advancing, fall in, and are put into confusion.

WOOD. Artillery carriages are generally made of elm, ash, and oak. The bed and house of a sea mortar are made of oak, and the bolster of elm. The bottoms of land mortar beds are of oak, and the upper parts of elm.

Carriages—Ship.—The cheeks, transoms, and trucks of elm; the axle trees of live oak.

———*Garrison.*—The whole of oak; trucks, iron.

———*Field.*—Heavy 24 and 12 Pr. the cheeks and transoms of elm; the axle trees of ash or hickory. In the wheel the nave and fellies are of elm; the spokes of ash; limber shafts, bars, and axle trees are of ash. Light guns, from 3 to 12 prs. the cheeks and transoms are of elm: the ammunition boxes are of sycamore. In the wheels, the nave is of elm, the spokes of oak, and the fellies of ash. In the limber the shafts and bars of ash.

WOOD *Matches*. See PORTFIRE.

WOODEN-*Bottoms*. In laboratory works, are cylindrical pieces of wood, of different lengths and diameters, agreeable to the size of the gun. They are hollowed at one end to receive the shot, and the flannel cartridge is fastened to the other end: the whole forming one cartridge, which is put into the piece at one motion. Iron bottoms are to be preferred.

WOOL-*Packs*. Bags of wool. They are frequently ranged in form of a breast-work, because they resist cannon-shot.—See SIEGE.

WORD (*Mot*, Fr.) A single part of speech, consisting of one or more syllables, for the purpose of expressing ideas. In a military sense, it signifies signal, token, order; as watch-word, &c.

The WORD, *Watch* WORD, Is a peculiar word that serves for a token and mark of distinction, given out in the orders of the day in times of peace, but in war every evening in the field, by the general who commands, and in garrison by the governor, or other officer commanding in chief, to prevent surprise, and hinder an enemy, or any treacherous person, to pass backwards and forwards. This watch-word is generally called the *parole*, and to which is added the *countersign*. The first is known to all officers and non-commissioned officers, the latter only to the centinels. The officers that go the rounds, or patroles, exchange the word with the officers on duty; nor must the centinels let any one pass who has not got the countersign.

WORDS *of command*, (*Mots de commandement*, Fr.) Certain terms which have been adopted for the exercise and movement of military bodies, according to the nature of each particular service. Words of command are classed under two principal heads, and consist of those which are given by the chief or commander of a brigade, battalion, or division, and of those which are uttered by the subordinate leaders of troops or companies, &c.

Cautionary WORDS, (*Commandemens d'avertissement*, Fr.) Certain leading instructions which are given to designate any particular manœuvre. The cautionary words precede the words of command, and are issued by the chiefs of corps.

WORKMEN. Are persons that attend the ammunition, boatsmen, carpenters, smiths, millers, bakers, waggoners, miners, pioneers, &c.

When soldiers are employed upon fatigue, or working parties, the drums and fifes, &c. should invariably play to time and measure. According to marshal Saxe, they should be relieved at the expiration of two hours and an half; by which means the individuals are less harrassed, and all the troops share alike. With regard to accompanying them in their labor with music, the policy of it is warranted by antiquity. The Lacædemonians, with a detachment of only three thousand men, under the command of Lysander, destroyed the famous Pyræus of Athens in less than six hours. During the whole of the operation, the flutes were piping, to enliven and encourage the troops. This custom existed in France to a late period among the galley-slaves at Marseilles; who, whilst they were employed in removing enormous loads of rubbish, &c. were constantly accompanied by musical instruments and drums.—

Marsh. Saxe's Reveries, pages 157 and 158.

WORKS. This term is generally understood to comprehend the fortifications about the body of a place; as by outworks are meant those without the first inclosure. The word is also used to signify the approaches of the besiegers, and the several lines, trenches, &c. made round a place, an army, or the like, for its security.

To WORM *a Gun*, (*Décharger un canon avec la tire-bourre*, Fr.) To take out the charge of a firearm by means of a worm.

Worm of a GUN, (*Tire-bourre*, Fr.) An instrument vermiculated or turned round, that serves to extract any thing into which it insinuates itself by means of a spiral direction. It is much the same as wad-hook, with this difference, that the one is more proper for small-arms, and the other for ordnance

To WORST. To defeat, to overthrow.

WORSTED. Defeated; put to the rout.

WORTHY. A man particularly distinguished, more especially for his valor, as the worthies of antiquity.

WREATH *of victory*. The garland or chaple, of triumph. See TRIUMPH.

WRESTLER. One who contends in wrestling.

WRESTLING. A contest for ascendancy of bodily strength; as when two wrestlers attempt to throw each other down. It was in great vogue among the Olympic games.

WRONG. An injury; a designed or known detriment; not right, not justice.

WRONGS. We have already observed under the article *Rights*, that although they are not specifically mentioned or described in the mutiny bill, they nevertheless exist in military life. Every officer and soldier possesses rights, and when either is wronged he is authorized to seek for redress. In the articles of war, it is expressly laid down, that if any officer shall think himself to be wronged by his colonel, or the commanding officer, of the regiment, and shall upon due application made to him, be refused to be redressed, he may complain to the general commanding, in order to obtain justice; who is required to examine into such complaint; and either by himself or by the secretary at war, to make his report. It will be observed, that officers may be peremptorily dismissed the service without trial or investigation.

If any inferior officer, non-commissioned officer, or soldier shall think himself wronged by his captain, or other officer commanding the troop or company to which he belongs, he is to complain thereof to the commanding officer of the station or regiment.

WUHAH, *Ind.* Sandals.

WULANDA, or WULANDEZ, *Ind.*—The Dutch are so called in India.

X

XEBEC, (*Chébec*, Fr.) A sort of armed vessel, with lateen sails, which is used in the Mediterranean.

XENOPHON. A Greek general who has rendered his name immortal by a well-conducted retreat; and is equally celebrated for good military maxims, which are still extant in his Cyropœdia.

XERIFF. A prince, or chief ruler in Barbary is so called.

XERXES. A king of Persia, son of Darius, and grandson of Cyrus. This monarch has been rendered notorious in history, by the extravagance of his preparations to invade Greece, and his ultimate failure; which latter may be attributed to the undisciplined state of his army, and to the presumption of his general Mardonius. He entered the Hellespont with so numerous a fleet, that it covered its surface between the two lands. The number he embarked exceeded 1,000,000 men, who were entirely defeated by 40,000 well-disciplined troops from Greece.

XYSTARCHA. In antiquity, the master and director of the Xystus.

In the Greek Gymnasium, the Xystarcha was the second officer, and the Gymnasiarcha the first; the former was his lieutenant, and presided over the two Xysti, as well as over every species of exercise that was practised therein.

XYSTER. An instrument used by surgeons to scrape and shave bones with.

XYSTUS. Among the ancients, a long portico, open or covered at the top, where the athletæ practised wrestling and running: the gladiators who exercised therein, were called Xystici.

Among the Romans, the xystus was only an alley, or double row of trees, meeting like an arbor, and forming a shade to walk under; so that, in this sense, it might be considered as an open walking place, where the Romans entertained one another.

Y

YACHT, (*Yacht*, Fr.) This word is taken from the Dutch. It is a small ship with one deck, carrying four, eight, or twelve guns, and thirty or forty men. Yachts, in general, are from 30 to 160 tons; contrived and adorned both within side and without, for carrying state passengers. They answer the purposes of business as well as pleasure, being remarkable good sailers.

YAD DASHT, *Ind.* A memorandum.

YEHOODY, *Ind.* A Jew.

YEOMAN. The French use this word when they allude to the yeomen of the guards. In a general acceptation of the word among us, yeoman signifies a free man, who has land of his own.

Yeoman *of the guard*. One belonging to a sort of foot guards, who attend at the British king's palace. The yeomen were uniformly required to be six feet high. They are in number 100 on constant duty, and 70 off duty. The one half wear arquebuses, and the other pertuisans. Their attendance is confined to the king's person, both at home and abroad. They are clad after the manner of king Henry VIII, and are commonly known by the name of the *beefeaters*.

The yeomen of the guards were anciently 250 men of the next rank under gentry. This corps was first instituted by king Henry VII. anno. 1486.

YEOMANRY. The collective body of yeomen. In this class may be considered men of small landed property, independent farmers, &c.

YESAWUL, *Ind.* A state messenger; a servant of parade, who carries a gold or silver staff; an aid-de-camp.

YETESAB, *Ind.* An officer who regulates the weights.

YOG, *Ind.* Junction, or union.

YIELD. See Surrender.

YOUNGER *regiment*, is that which was last raised. See Seniority.

Younger *officer*, is he whose commission is of the latest date; and according to these rules, regiments and officers are posted and commanded. See Seniority.

YOUNGSTERS. A familiar term to signify the junior officers of a troop or company. The word youngster is likewise used in the navy. The French say *mousse* in naval phraseology.

Z

ZAAT, *Ind.* Division of people into tribes or sects.

ZAGAIE, *Fr.* A weapon made in the form of a long dart, which the Moors make use of in battle, and which they cast with extreme dexterity.

ZAIMS. Principal leaders or chiefs; after whom a mounted militia which they support and pay is called among the Turks.

ZAYM, *Ind.* A feudal chief, or military tenant.

ZEAL. More than common ardor for the good of the service.

ZEBANBUNDY, *Ind.* A deposition.

ZEINAUB, *Ind.* A term of distinction used to persons of rank or eminence.

ZEMEEN, *Ind.* Ground.

ZEMEENDAR, *Ind.* A person who holds a tract of land in his own right.

ZEMEENDARY, *Ind.* The lands of a zemeendar.

ZENITH, *Zenith*, Fr. The point or vertex in the heavens directly over one's head. If we conceive a line drawn through the observer and the centre of the earth, which must necessarily be perpendicular to the horizon, it will reach to a point among the fixed stars called the zenith.

The zenith is directly opposite to the Nadir; one above our heads, and the other below our feet.

ZERAKET, *Ind.* Agriculture.

ZERB, *Ind.* A blow; a stroke.

ZERB SHALLAAK, *Ind.* A blow given with a stick.

ZIG-ZAG, *Fr.* A term used in mechanics. The working beams or balances which give motion to the several pumps to throw the water up from the river to the hill at Marly, near Paris, form a sort of zig-zag.

ZIG-ZAGS, in fortification, are trenches or paths with several windings, so cut, that the besieged are prevented from enfilading the besieger in his approaches.

ZIMRA, *Ind.* A certificate.

ZINDIGEE, *Ind.* Grain, cattle, lands, plantations.

ZIYAMUT, *Ind.* A fief bestowed for military services.

ZULLUM, *Ind.* Violence; oppression.

ZUROOREAT, *Ind.* Necessaries.

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